

# COMMUNITY HOSPITALS: INFLATION IN THE PRE-MEDICARE PERIOD

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# Abstract

To identify causes of hospital inflation in the years immediately preceding the introduction of Medicare, this study examines a number of inflation theories with new data on the components of hospital revenue and expenses for fiscal years 1962 through 1966.

Specifically, purposes of the study are (1) to bring together and contrast some of the causes of hospital inflation that have been suggested in the literature; (2) to present and analyze data on the components of hospital expenses based on a nationwide sample survey of community hospitals conducted for the Social Security Administration; and (3) to suggest possible causes of inflation as a guide to additional research.

The study first examines major trends in hospital revenues and expenses by type of hospital ownership and size of hospital. In addition, important trends in the utilization of inpatient and outpatient hospital services are discussed.

As a basis for testing theories based on a labor cost-push model or stressing wasteful capital expenditures, the study decomposes total hospital expenses into factor input expenses. How much of the rise in expenses was due to price and how much to increased quantity of inputs, and whether the types of labor and capital inputs used have changed over time are investigated. Trends in wages of different types of hospital personnel are reviewed to determine if wages of unskilled hospital workers have been rising relative to those of skilled workers.

The study also examines trends in departmental hospital revenues and expenses and explores their implications for inflation theories emphasizing advances in technology and expansion in the scope of services provided by hospitals.

Some findings from the study for the pre-Medicare period are:

1. Unlike most industries where gains in productivity tend to offset rises in prices of factor inputs, over one-half of the inflation in the hospital industry results from an increase in the quantities of inputs used in the provision of a day of care.

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# COMMUNITY HOSPITALS: INFLATION IN THE PRE-MEDICARE PERIOD

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## FOREWORD

SUBSTANTIAL CHANGES in the financing and cost of hospital care occurred with the advent of the Medicare and Medicaid programs in 1966. In order to analyze the impact of these programs on hospital costs and revenues, the Social Security Administration contracted with the American Hospital Association to obtain audited revenue, expense, and utilization data for the 5 fiscal years before the introduction of Medicare. The sample data for these 5 years have been inflated to provide estimates of revenues and expenses for all U. S. community hospitals from fiscal 1962 to fiscal 1966. This report summarizes the important trends in hospital revenues and costs in the pre-Medicare period. Future studies will contrast the pre-Medicare experience with that of the Medicare period.

Aside from providing a base to analyze the Medicare period, the pre-Medicare data on community hospitals provide comprehensive, detailed information on hospital expenses and revenues. Data available for the first time on a nationwide basis include:

- (1) hospital earnings in excess of expenses other than depreciation expenses;
- (2) labor and capital expense components of hospital costs, including types of labor employed, wage structure, types of hospital beds, and composition of plant assets;
- (3) sources of hospital revenues; and
- (4) departmental revenues and expenses from which price-cost margins on various ancillary services can be derived.

These aspects of hospital behavior will be explored for various types of organizational control (nonprofit, for-profit, State and local government hospitals) and for different size hospitals.

Karen Davis was responsible for the analysis and presentation of the basic data and the writing of the report. Now of the Brookings Institution, she was on the Office of Research and Statistics staff at the time the study was initiated.

Richard Foster, of the American Hospital Association, prepared all of the basic data for this report. He was responsible for developing and carrying out the methodology used in inflating the sample data to obtain population estimates. Section II and appendix B were based upon a description of the methodology of the statistical procedures reported in

"The Financial Structure of American Community Hospitals: 1962-1966," by Richard W. Foster and Belverd Needles, Jr., of the American Hospital Association. This report was based on the same survey and investigated the asset and liability position of community hospitals over the period.

Joseph Steinberg and Nathaniel M. Pigman, Jr., of the Social Security Administration were instrumental in the sample design and provided statistical advice for the study. The analysis has had the benefit of the continuing advice of Mrs. Dorothy Rice of the Division of Health Insurance Studies.

The views expressed here are those of the author who made the analysis; they should not be ascribed to the Social Security Administration nor to the trustees, officers, or other staff members of the Brookings Institution or the American Hospital Association.

IDA C. MERRIAM,  
*Assistant Commissioner for Research and Statistics.*

APRIL 1972.

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## I. HOSPITAL INFLATION

IN THE EARLY 1960's hospital costs were increasing at an annual rate of 6 percent—far in excess of the rise in the prices of all consumer goods.<sup>1</sup> With the introduction of the Medicare and Medicaid programs in 1966, the rate of increase of hospital costs more than doubled. Average hospital costs increased at an annual rate of 13.9 percent from 1967 to 1970. Nor is there any indication that this increase is tapering off—the percentage increase in 1970 was greater than in any preceding year, 15.7 percent. Sources of inflation in the earlier period were not well understood; the sudden, rapid rise in hospital costs in the later period was largely unanticipated and even less well understood.

Since the causes of this inflation are unknown, policy tools to combat it are difficult to design. If the inflation is a consequence of increasing demand without increases in supply, an expansion in number of hospital beds may be warranted. If the inflation is a labor cost-push inflation, attempts to curtail labor costs through wage guidelines or controls may be the appropriate policy. If the inflation is induced by certain types of insurance coverage, a restructuring of insurance coverage may be called for. If the inflation is induced by inefficiencies in the hospital market, structural reform of the industry may be a desired course of action. If the inflation is the result of advances in medical technology, inflation may simply be a necessary price for improvement in health status.

Ignorance about the nature and sources of hospital inflation stems in part from a failure to synthesize and contrast theories of hospital inflation and in part from an absence of sufficient data for testing alternative theories. The purposes of this report, therefore, are (1) to bring together and contrast some of the causes of hospital inflation that have been suggested in the literature, (2) to present data on the components of inflation, and (3) to suggest possible causes of inflation as a guide to additional research.

This study is of necessity limited because it is based on data for the pre-Medicare period and because it relies upon descriptive data for analysis. Subsequent analyses of data for the Medicare period will esti-

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<sup>1</sup> The consumer price index grew at an average annual rate of less than 2 percent in the early 1960's. Hospital inflation rates are based on total expenses per patient day in community hospitals. See *Hospitals*, Guide Issue, August 1, 1971.

mate a model of hospital inflation using multivariate regression techniques. The pre-Medicare data, however, should be useful in at least two respects. First, they should help provide information on the mechanism by which inflation occurs. The process by which inflation occurs may apply in any period. Second, components of hospital expenses in the pre-Medicare period may serve as a useful baseline in attempts to reduce the current rate of inflation. Guidelines or controls on hospital inflation may initially take the form of restoring the pre-Medicare trends in hospital expenses.

An adequate job of investigating why inflation occurs requires simultaneous consideration of all determinants of inflation. This task is beyond the scope of this report. Yet descriptive data do more than just tell how costs have increased. First, factual evidence can rule out certain theories of inflation based upon factual assertions. For example, if labor costs are constant over the period, labor cost-push theories of inflation can be dismissed. Second, factual evidence can indicate the magnitude of possible sources of inflation. For example, if the inflation is blamed on increased paperwork caused by growing insurance coverage and governmental programs, the relationship of administrative expenses to all hospital expenses can indicate the maximum impact of this source of inflation. Third, descriptive data can delineate the major components of inflation so that attention can be focused on those expenses showing the most rapid growth. Finally, an examination of the components of hospital inflation can suggest research for determining why costs have increased.

### Theories of hospital inflation

Hospital inflation can refer to any one of four possible definitions: (1) a relatively sharp increase in hospital revenues, (2) a relatively sharp increase in total hospital costs, (3) a relatively sharp increase in average prices charged for hospital services, or (4) a relatively sharp increase in average cost of hospital care. The first two are concerned with *total* revenues and costs while the last two are concerned with revenues and costs *per unit of service provided* (average revenues or costs). To the extent that hospital revenues exceed costs or hospital prices are set higher than average costs, the first and third definitions will yield different information from the second and fourth definitions. Most theories of hospital inflation have been concerned with *average* costs. Many policy prescriptions, however, have been concerned with reducing *total* hospital expenditures (such as by promoting alternatives to hospitalization). The following synopsis of theories of hospital inflation, therefore, will include both those explaining increases in total expenditures and those dealing with increases in average costs or prices.



1. *Demand-pull theories of inflation.*—M. Feldstein<sup>2</sup> has argued that increases in hospital costs have been induced primarily by increases in the demand for hospital care. As insurance coverage increases and reduces the patient's out-of-pocket cost of hospital care, individuals demand higher quality care, and more amenities such as better food service, more nursing personnel, and more cheerful accommodations. Since increasing insurance coverage allows hospitals to charge higher prices without reduction in capacity utilization, hospitals may use the increased revenues to introduce more expensive technology, hire additional staff, increase employees' salaries beyond the amount necessary to attract the desired labor force (called "philanthropic" wage increases) and add patient amenities. Hospitals, therefore, respond to the increases in demand by raising costs and prices to the highest level consistent with maintaining a desired level of occupancy.

The potential for an increase in hospital prices induced by insurance coverage is quite high. To illustrate this, suppose that in the absence of hospitalization insurance, a hospital could charge \$100 per hospital stay and maintain a given level of capacity. A change to insurance coverage which reduces patients' out-of-pocket costs to 20 percent of hospital charges permits the hospital to charge \$500 per stay without any increase in the out-of-pocket cost to the individual. Although individuals will have higher total payments (including hospitalization insurance premiums), the insurance premium, once paid, is a fixed cost and will not influence the individual's decision regarding hospitalization.<sup>3</sup> M. Feldstein<sup>4</sup> points out that the *net* cost of hospital care has only increased from about \$10 per day in 1950 to \$16 per day in 1968, although the *total* cost of hospital care per day has increased substantially over that period—rising from \$16 per day in 1950 to \$61 per day in 1968. With rising incomes and only a slight rise in out-of-pocket costs, it is not surprising that individuals have demanded a much more expensive type of hospital care. And since with increasing insurance coverage the hospital can greatly increase the cost of hospital care without increasing the direct financial burden on its patients, it is not surprising that hospitals have responded to the increase in demand by providing a more expensive type of hospital care.

Since these pricing and cost policies are inconsistent with profit-maximization on the part of the hospital, the theory is likely to be more relevant in explaining nonprofit hospital behavior than that of hospitals organized on a for-profit basis. A for-profit hospital may respond to an increase in demand by raising prices, but it is less likely to increase its expenses accordingly. Some evidence on the validity of this hypothesis, therefore, may be obtained by contrasting nonprofit hospitals' and for-profit hospitals' expense patterns.

<sup>2</sup> Martin S. Feldstein, "Hospital Cost Inflation: A Study of Nonprofit Price Dynamics," *American Economic Review*, Vol. 61, No. 5 (December 1971), pp. 853-872; and *The Rising Cost of Hospital Care* (Washington, D.C.: Information Resources Press, 1971).

<sup>3</sup> This analysis applies as well when the physician is the primary decision-maker in hospitalization cases, provided he is concerned about the financial burden hospitalization represents to his patient.

<sup>4</sup> *The Rising Cost of Hospital Care*, p. 14.

2. Another hypothesis of demand inflation also emphasizes the role of increasing insurance coverage and incomes in raising the prices hospitals can charge for their services. However, this theory differs from the demand-pull theory in two important respects. It presumes that (a) prices are set at a monopolistic or oligopolistic level rather than at a level which will clear the market for a given a priori desired occupancy rate, and that (b) average costs are not necessarily raised to equal prices. Instead, earnings in excess of expenses may be used for capital investment—leading to increases in future operating expenses. Although costs eventually rise in response to demand increases in both theories, the types of predicted cost increases are quite different. In the Feldstein model costs may increase as a result of more expensive technology, additional staff, higher employee salaries, and additional patient amenities. In this theory of demand inflation, those expenses which can be expected to increase are direct capital expenses (such as depreciation) and capital-related expenses (such as for specialized personnel to operate the new capital equipment). Barriers to the entry of new hospitals and absence of aggressive price competition among hospitals prevent prices from reaching competitive levels even in the long run.

This version of demand inflation also applies primarily to nonprofit hospitals. Although nonprofit hospitals may pursue a pricing policy quite similar to for-profit hospitals, the latter are not as likely to use the accumulated earnings solely for expansion of capital equipment.

Figure 1 illustrates the rise in hospital prices predicted by these demand theories of inflation. The increase in insurance coverage shifts demand upward from  $D_1$  to  $D_2$ . In the Feldstein model, hospitals react to the increase in demand by raising price by the maximum amount which will still maintain a given desired level of occupancy. Average costs are increased to equate them with prices. In a model of hospital behavior based upon the assumption of competition in the hospital market, the rise in demand would also lead to some increase in price if the supply curve were not infinitely elastic. The price rise, however, would be less than in the Feldstein model in which supply is perfectly inelastic. In the noncompetitive case, the impetus to rising prices comes from an increase in the marginal revenue the hospital derives from each additional unit of hospital care. Equating marginal cost with the new higher marginal revenue leads to a substantial increase in the price charged for care.

3. *Wasteful capital expenditures.*<sup>5</sup>—This theory of hospital inflation

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<sup>5</sup> Wasteful or excessive capital is usually not well defined. Two approaches to defining excessive capital are commonly employed. Some depict it in terms of medical "needs." If an area already has some capital facility which is not being used to capacity, it does not "need" another one. If a hospital has a facility which is not used at all during the year, the facility is unnecessary. Others define wasteful or excessive capital in relation to that capital which a profit-maximizing or cost-minimizing hospital would acquire. If nonprofit hospitals acquire capital equipment which would not be profitable for a profit-maximizing firm to acquire, the capital is excessive. The first approach is inadequate both because it is ambiguous and because it does not take into account "option demand." (See Burton A. Weisbrod, "Collective-Consumption Services of Individual Consumption Goods," *Quarterly Journal of Economics*, Vol. 78 (August 1964), pp. 471-477.) That is, the community may be perfectly willing to pay for a cardiac intensive care unit, even though the unit may never be used, just to have it available on a standby basis. The second approach is inadequate in that it allows only for private benefits in the capital investment decision, and neglects the

singles out a particular factor of production as the principal source of inflation.<sup>6</sup> It arises from the assumption that nonprofit hospitals are more interested in acquiring capital equipment and facilities than in providing hospital care at minimum cost. Wasteful duplication of specialized facilities among hospitals in a given area may occur. In part the acquisition of specialized capital equipment and facilities stems from an effort on the part of the hospital to attract topnotch physicians to its staff. In part hospital administrators, themselves, derive utility from having the best-equipped most modern facilities. Acquisition of a cobalt therapy unit or cardiac intensive care unit by one hospital in an area serves as a signal for all other hospitals in the area to acquire the facilities as well, rather than a recognition that one unit may be sufficient to meet the needs of the area. The hospital cost inflation of the last decade is traced by proponents of this hypothesis to tremendous increases in specialized hospital capital equipment, with concomitant increases in specialized personnel to use the equipment.

This theory of inflation is not linked to any particular model of price determination or capital financing methods. Prices may play a passive role—simply being increased in response to rising costs, or they may be used to generate internal funds for capital investment. Constraints on the rate of capital accumulation may be imposed by limited access to borrowing, reluctance to use Federal funds, or limited philanthropic donations. The existence of effective areawide health facility planning agencies may also curtail capital expansion.

4. *Labor cost-push inflation.*—Since a large proportion of hospital costs are labor costs, this portion of hospital expenses has occasionally been singled out as the principal villain in hospital cost inflation. Several causes of rising labor costs have been advanced. Some of the more generous advocates of this theory argue that hospital workers have been traditionally underpaid relative to comparable occupations, and recent increases have represented a catching-up of hospital wages.<sup>7</sup> Others contend that increasing unionization of hospital workers or the threat of unionization are responsible for exorbitant increases in hospital wages.<sup>8</sup> Still others point to the tight labor market in the mid-1960's as the source of increased pressures for higher wages.<sup>9</sup> Another possible explanation could be a

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social benefits that a particular capital investment may entail. For example, a kidney dialysis machine may not be profitable since those requiring treatment may not be able to cover the high cost. Yet, if society values lives saved through this equipment, the socially optimal amount of investment may exceed that which a profit-maximizing firm would undertake.

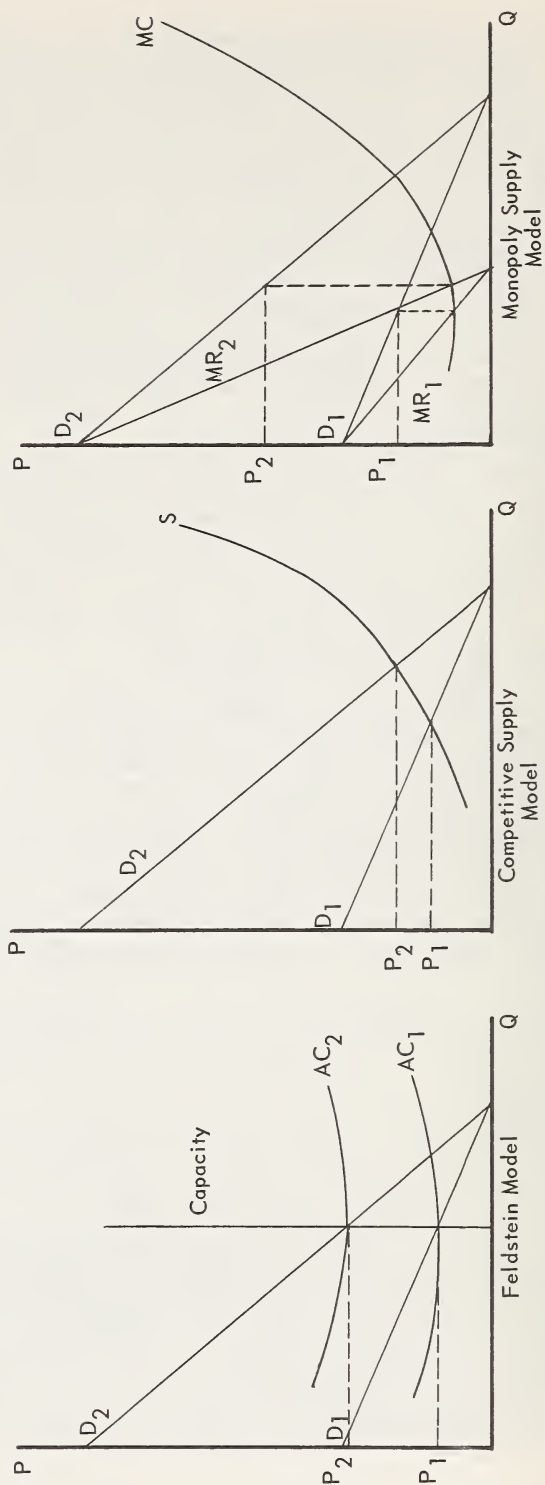
<sup>6</sup> See, for example, Maw Lin Lee, "A Conspicuous Production Theory of Hospital Behavior," *Southern Economic Journal*, Vol. 38, No. 1 (July 1971), pp. 48-58; and Karen Davis, "A Theory of Economic Behavior in Nonprofit, Private Hospitals," unpublished doctoral dissertation, Rice University, 1969.

<sup>7</sup> For some evidence that hospital wages in some instances now exceed wages in comparable occupations, see Feldstein, *The Rising Cost of Hospital Care*, chapter 5.

<sup>8</sup> An American Hospital Association survey in 1967 found that only 6.8 percent of non-Federal hospitals have a union contract. However, the threat of unionization may also exert an upward pressure on wages. See T. L. Ehrich, "Union on the Rise: A Tough Local Presses National Bid to Organize Low-Paid Hospital Help," *Wall Street Journal*, March 3, 1970, p. 1.

<sup>9</sup> See, for example, U.S. Department of Health, Education, and Welfare, *A Report to the President on Medical Care Prices*, Washington, D.C., 1967, p. 2.

FIGURE 1





change in the composition of hospital employees to more highly skilled personnel, including physicians.<sup>10</sup>

A variant of the labor cost-push inflation theory is the productivity theory of inflation.<sup>11</sup> This theory holds that in labor-intensive industries, such as the hospital sector, opportunities for productivity increases are slight. Since wages in other industries increase with productivity gains, hospitals must raise their wages correspondingly to obtain an adequate labor force. Since these increases in hospital wages are not offset by productivity gains, hospital costs per unit of output must rise.

5. *Cost reimbursement hypothesis*.—This theory of inflation views the growth of insurance plans which reimburse hospitals on the basis of costs as the principal determinant of rising hospital costs. As insurance companies such as Blue Cross and governmental programs such as Medicare and Medicaid increasingly reimburse hospitals on the basis of cost or cost-plus, hospitals realize that costs incurred can simply be passed on to third-party payers. Hospitals have little incentive to economize on supplies, buy the lowest cost equipment, or keep salaries down. Advocates of this hypothesis argue that incentive reimbursement or prospective reimbursement schemes must be devised to hold down hospital costs.<sup>12</sup>

6. *Scientific progress hypothesis*.—This argument contends that the principal source of hospital cost inflation is advances in medical technology. New developments have made it possible to save (at high cost) many lives that formerly could not have been saved. Intensive care units, heart-lung machines for open-heart surgery, and radiation therapy units all reflect this change to more advanced methods of combatting illness and prolonging life.

7. *Extended hospital services*.—This theory of hospital inflation is concerned with increases in total *hospital* costs or expenditures. According to this hypothesis of hospital cost inflation, the principal source of inflation is an expansion in the scope of services offered by hospitals. This is somewhat different from the scientific progress argument since it does not depend upon advances in technology. Instead it reflects a substitution of hospital care for other types of medical providers. For example, many short-term hospitals now provide psychiatric inpatient and outpatient services which formerly were available only in mental hospitals. Intensive care units provide the intensive nursing care formerly provided by private

<sup>10</sup> Feldstein, *The Rising Cost of Hospital Care*, chapter 5, presents some evidence which suggests that the skill-mix may have actually declined in the early 1960's.

<sup>11</sup> For a discussion of this theory, particularly as it applies to urban services, see William J. Baumol, "Macroeconomics of Unbalanced Growth: The Anatomy of Urban Crisis," *American Economic Review*, Vol. 57, No. 3 (June 1967), pp. 415-26.

<sup>12</sup> For a discussion of the cost reimbursement hypothesis, see Herbert E. Klarman, "Approaches to Moderating the Increases in Medical Care Costs," *Medical Care*, Vol. 7, No. 3 (1969), pp. 175-90; "Policy Alternatives in Controlling Health Services Expenditures," paper delivered at annual meeting of the American Economic Association, Dec. 28, 1970; and "Reimbursing the Hospital: The Difference the Third Party Makes," *Journal of Risk and Insurance*, Vol. 36 (December 1966), pp. 533-66. Empirical tests of this hypothesis are contained in Mark V. Pauly and David F. Drake, "Effect of Third-Party Methods of Reimbursement on Hospital Performance," in Herbert E. Klarman (ed.), *Empirical Studies in Health Economics* (Baltimore: The Johns Hopkins Press, 1970), pp. 297-314; and Karen Davis, "Theories of Hospital Inflation: Some Empirical Evidence," *Journal of Human Resources* (forthcoming).



duty nurses. Substitution of hospital emergency room services for private physician care, precipitated by a growing unavailability of physicians after hours and a decline in physician visits to the home, is another example of an expansion in the role of the hospital. These changes may not substantially affect total expenditures for medical care, but they do increase the community hospital component of medical care expenditures.

8. *Excessive hospital utilization.*—Another theory of total hospital cost inflation with a slightly different emphasis is the excessive utilization theory. In this case, increased use of hospital services is not simply substituting for other forms of care but represents “medically unnecessary” increases in the use of medical care resources. Insurance coverage may be particularly instrumental in inducing this type of inflation. As insurance coverage has increased and the price of hospital care to the patient has been reduced, physicians and patients have reduced incentives to avoid hospitalization or unnecessarily long stays. Threat of malpractice suits may also induce physicians to show caution by hospitalizing marginal cases, keeping patients hospitalized a little bit longer, and ordering extensive laboratory and X-ray tests. Hospitalization insurance, therefore, may alter the physician’s trade-off between limiting medical risk and posing a financial hardship to his patients.<sup>13</sup> Insurance may also distort the use of medical care resources toward excessive hospitalization. If a physician’s fee for a minor surgical procedure is covered when the patient is hospitalized but not when performed in the physician’s office, hospitalization may increase.

9. *Capacity constraint hypothesis.*—This hypothesis argues that increases in hospital costs are largely a short-run phenomenon. As large increases in demand such as those generated by Medicare and Medicaid have occurred, the hospital is forced to operate at an inefficiently small size for the large demand. Employees may have to work overtime or highly trained nurses may have to perform services that could be provided at lower cost by other personnel. The hospital must operate on the steeply rising portion of its short-run average cost curve. Once the hospital has an opportunity to expand capacity or hire a more suitable mix of personnel, costs will fall. A variant of this hypothesis is that as demand is greatly increased prices must be raised to ration the available capacity among those demanding hospital care. As capacity is expanded, prices no longer have to be kept at high levels.

10. *Nonoptimal size-distribution of hospitals.*—This hypothesis holds that higher hospital costs are the result of inappropriately sized hospitals. Small hospitals which are unable to exploit economies of scale in the provision of hospital services may have unnecessarily high costs. For some hospitals the reverse may be true—hospitals may be too large relative to demand and wasteful excess capacity may persist. Also, some simple cases may be treated in large, complex hospitals so that high cost resources are unnecessarily expended in their treatment. Over time, some portion of hospital cost inflation may be attributable to a shift toward greater utilization of high-cost hospitals.

The above description of hospital inflation theories has presented the theories as quite distinct causes of inflation. In practice, of course, many

<sup>13</sup> For a model of physician behavior with constraints reflecting patients’ financial burden and medical risk, see Louise B. Russell, “A Cost Model of Medicare,” unpublished dissertation, Harvard University, 1970.

of the causes interact and different elements of different theories sometimes appear in more than one theory. For example, the Feldstein demand-pull hypothesis of hospital inflation is not inconsistent with the "philanthropic wage setting" portion of the labor cost-push hypothesis or with the wasteful capital expenditures theory of inflation. Therefore, it is not only conceivable, but to be expected, that some of the evidence will be consistent with more than one theory of inflation. In addition, some causes of inflation, while not important for the pre-Medicare period, may have been quite important sources of inflation in the late 1960's. In examining the data on hospital costs and revenues in the pre-Medicare period, an effort will be made to indicate which portions of various theories of inflation seem to be consistent with the evidence and which theories of inflation do not seem to be important sources of inflation in the pre-Medicare period.

### Outline of study

Section III presents overall trends in hospital financial position. Trends in total revenues and expenses over the period for all community hospitals as well as by type of ownership control and by bed size are examined. Utilization of inpatient and outpatient hospital services is reviewed to determine if increases in utilization are major sources of increases in total hospital expenditures or costs.

Section IV decomposes hospital expenses into factor input components and analyzes to what extent labor and capital expenses are responsible for overall hospital inflation. An attempt is made to distinguish between increases in factor expenses that are attributable to increases in prices paid for inputs and those increases that are attributable to a greater number of inputs being used in the provision of a day of hospital care. The composition of labor expenses by type of employee is investigated to determine if any of the rise in this component of hospital expenses is accounted for by a change in the skill-mix of employees. Changes in the composition of hospital plant assets and bed complement are also explored.

Section V views hospital expenses from another vantage point—that of the individual department. Growth in departmental operating expenses (such as administrative expenses, nursing service expenses, laboratory service expenses) is contrasted. The relative importance of room and board charges and charges on ancillary services (operating room charges, X-ray charges, etc.) in generating patient revenue is depicted. Then, the ratio of patient revenue to direct costs of providing various services is calculated to reveal the mark-ups earned on various types of services.

Section VI concludes by summarizing the important findings of the study and indicating the implications of these findings for theories of hospital inflation.

## II. DATA AND METHODOLOGY

IN ORDER to analyze the impact of the Medicare and Medicaid programs initiated in 1966, the Social Security Administration contracted with the American Hospital Association to provide audited accounting statements for the 5 fiscal years prior to the introduction of Medicare in July 1966. These statements included balance sheet statements, profit and loss statements, departmental breakdown of revenues and expenses, utilization data such as beds, admissions, patient days and outpatient visits, and data on hospital personnel and payroll expenses. The questionnaire is reproduced in appendix A.

A total of 462 hospitals were asked to participate in the survey. These were selected from the list of all non-Federal short-term nonpsychiatric hospitals that were registered with the American Hospital Association in 1967 and were certified to participate in Medicare. The Medicare certification requirement differentiates this group from the group of hospitals generally referred to as "community" hospitals. The difference, however, is small. The study universe included 98 percent of all beds in community hospitals. This report, therefore, will frequently refer to the hospital population as all U.S. community hospitals.

Hospitals were initially stratified according to organizational control, that is, non-Federal governmental, Catholic, other voluntary, and for-profit. Within the control categories, hospitals were further stratified according to bed size in 1965. Within strata, systematic sampling was used. An initial stratification on the basis of growth of total expenses was later collapsed.

About two-thirds of the sample hospitals submitted usable data for the study (see appendix B). Participation was higher for Catholic and other voluntary hospitals than for governmental and for-profit hospitals, with especially poor participation by for-profit hospitals. In this study, it is assumed that participants are representative of all hospitals in the same stratum.

To obtain population estimates of the various items in the statements, the average value of the item per bed for responding hospitals within a

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NOTE: Section II is based on the methodology section of Richard W. Foster and Belverd Needles, Jr., "The Financial Structure of American Community Hospitals: 1962-1966," mimeographed, American Hospital Association, 1971.

stratum was multiplied by the total number of beds for all hospitals in that stratum. Aggregate estimates were obtained by summing stratum estimates. Estimates of ratios were obtained by estimating the numerator and denominator separately and then taking the ratio of these estimates.

For additional information on the sampling design and estimation procedure, see appendix B. Comparisons of the population estimates with data reported in the annual *Hospitals* Guide Issues are also contained in the appendix, along with the standard error estimates.



### III. HOSPITAL FINANCIAL POSITION

SINCE SOME THEORIES of inflation are concerned with price inflation while others are applicable primarily to cost inflation, this section will examine major trends in hospital revenues and expenses to determine if revenues tend to equal or exceed expenses. If revenues are not identical to expenses, theories of inflation which explain both movements in prices and movements in costs may be required. In addition, important trends in utilization of hospital services will be examined in an attempt to shed some light on *total* cost or expenditure inflation. In particular, the following questions will be addressed:

1. Do hospital revenues exceed expenses? Has this divergence increased over the period?

2. Do hospitals' revenues exceed their out-of-pocket expenses (expenses other than depreciation expenses)? Has this differential increased over the period?

3. Are there important differences in the relationship between average revenues and average costs by the type of hospital ownership (nonprofit, for-profit, State and local government)?

4. Do small hospitals make greater rates of return than large hospitals?

5. How rapidly has per capita utilization of hospital inpatient and outpatient services increased over the period?

6. Have there been any major switches in the importance of different types of hospitals (nonprofit, for-profit, State and local government) in the provision of hospital services?

7. Has there been a shift toward greater use of large hospitals than of small hospitals?

8. Can any significant portion of the increase in overall hospital costs be explained by shifts in utilization to higher cost hospitals?

#### Major trends in hospital revenues and expenses

The overall financial position of community hospitals improved slightly from fiscal year 1962 to fiscal year 1966. As shown in table 1, revenues increased from \$6.6 billion in 1962 to \$9.9 billion in 1966—a 50-percent increase. Expenses increased somewhat less rapidly, so net income (the difference between revenues and expenses) increased from \$127 million in 1962 to \$198 million in 1966. There has been some tendency, therefore, for prices to increase relative to average costs over the period.



In part, the 50-percent increase in community hospital revenues and expenses reflects a growth in the use of hospital services. When revenues and expenses are divided by the number of inpatient days provided by hospitals, the growth in revenues and expenses per patient day is reduced to about 30 percent. Daily costs of hospital care increased \$10 a day—from \$35 in 1962 to \$45 in 1966.

The cash-flow position of community hospitals, defined as net income plus depreciation expenses, showed an even more favorable increase than net income—from \$388 million in 1962 to \$625 million in 1966. Since hospitals receive a large proportion of their capital funds from governmental grants and donations, hospital depreciation expenses do not play the same role as depreciation funds in other types of businesses. Typically, hospital depreciation expenses are not funded or restricted to replacement of existing capital facilities, so they may be used for any of a number of purposes. The excess of revenues over expenses other than depreciation reflects more accurately than net income data, therefore, the pool of funds available to the hospital for future use. These cash-flow data present, for the first time, the magnitude of this component for U.S. community hospitals.

In spite of the fact that most community hospitals are nonprofit hospitals, profits, on balance, are not zero. Table 2 presents trends in net income and cash flow as percentages of total revenue and plant assets. Net income averaged 2 percent of total revenue in the 1962 to 1966 period, while cash flow averaged 6 percent of total revenue over the period. The ratios averaged somewhat lower when compared relative to plant assets. Net income represented 1.5 percent of plant assets while cash flow averaged 4.5 percent of plant assets over the period. In some respects these ratios are comparable to rates of returns on sales or assets for other types of firms. It should be noted, however, that expenses on borrowed capital are excluded from returns, so the ratios understate total returns to all capital. Adding interest expenses to net income yields an average capital return of 1.9 percent of plant assets.

Since the growth in average revenues does diverge from the growth in average expenses, it is worthwhile to make a distinction between hospital price inflation and hospital cost inflation. Theories of hospital inflation which attempt to explain change over time in the prices hospitals charge for various services should help supplement our understanding of the forces that induce changes in hospital costs over time.

### **Hospital revenues and expenses by type of control**

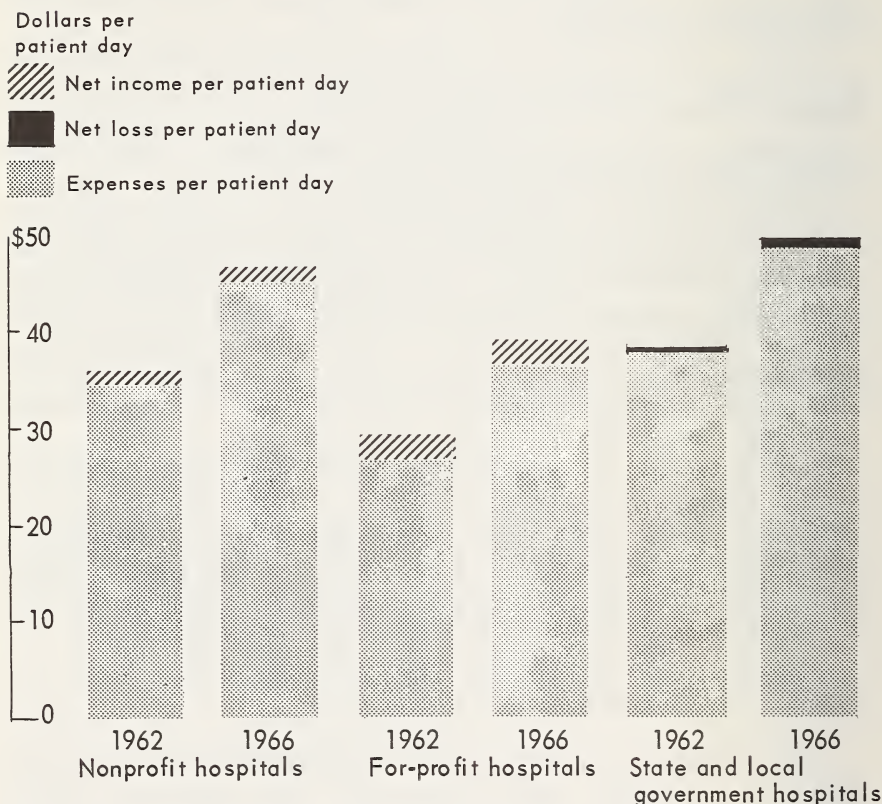
The earnings data for all community hospitals include State and local government hospitals, which traditionally incur substantial losses. Hence, the total net income data understate the profits of nongovern-

mental nonprofit and for-profit hospitals. Table 3 presents revenue and expense data for each of the three types of control.

Nonprofit hospitals had the most rapid increase in net income, increasing from \$123 million in 1962 to \$216 million in 1966. When depreciation expenses are added to net income, nonprofit hospitals make sizable rates of return. As shown in table 4, cash flow of nonprofit hospitals averaged 7.4 percent of revenues over the period.

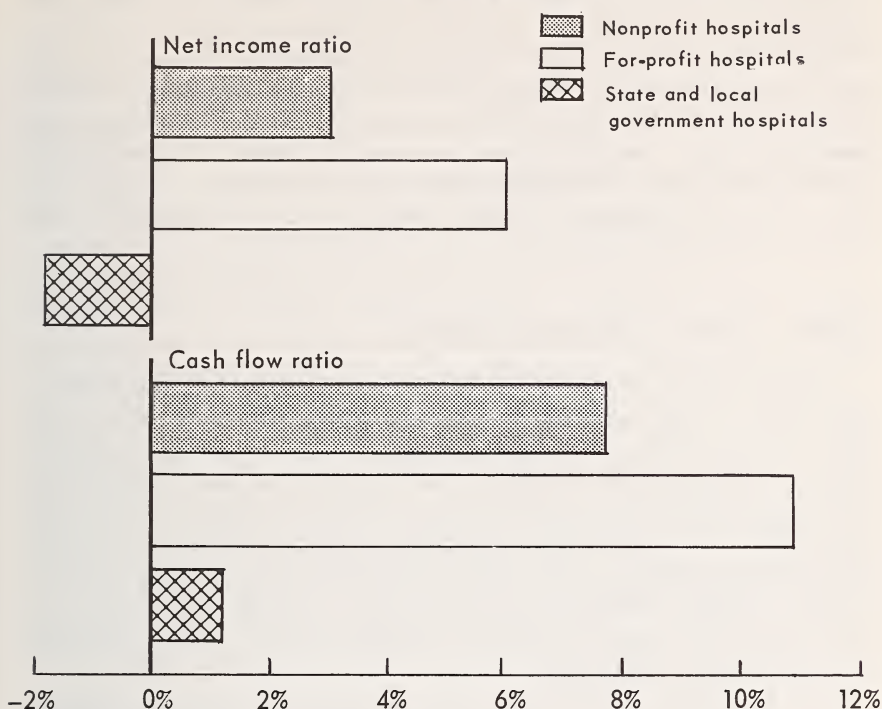
For-profit hospitals had a much more rapid increase in expenses than nonprofit hospitals (80 percent over the period, compared with a 50-percent increase in nonprofit hospital expenses). Part of the explanation lies in the more rapid increase in utilization of for-profit hospitals. On a per patient day basis, for-profit hospital expenses increased 36 percent, compared with a 30-percent increase in nonprofit hospitals' expenses. The absolute level of for-profit hospital expenses, however, was still about \$8 a day lower than nonprofit hospital expenses in 1966 (\$36.54

**Chart 1—Hospital revenue, expenses, and net income per patient day by control, 1962 and 1966\***



\*Revenue = Expenses + Net Income, or Expenses - Net Losses

Chart 2—Ratios of hospital net income to total revenue  
and of cash flow to total revenue by type of control, 1966



in for-profit hospitals and \$44.97 in nonprofit hospitals—see chart 1). The lower absolute cost of for-profit hospitals may reflect a greater efficiency of operation, a simpler case-mix of patients, or a difference in labor market conditions facing the two types of hospitals. Whatever the cause of the lower cost level, the greater rate of increase of for-profit hospital expenses suggests that for-profit hospitals have not become relatively more efficient than nonprofit hospitals over time.

Not surprisingly, for-profit hospitals earned the highest rates of return of any of the three types of hospitals. Net income as a percent of plant assets averaged 9.4 percent over the period. To the extent that for-profit hospitals rely to a greater degree upon borrowed capital (a reasonable assumption since for-profit hospitals are not eligible for Federal funds for construction), the rate of return of for-profit hospitals is understated relative to the other types of hospitals. If returns to borrowed capital (interest expenses) are added to net income, for-profit hospitals earn a capital return rate of 11.9 percent on plant assets.

State and local government hospitals have the highest expenses per patient day of the three types of hospitals—although the rate at which these expenses have increased over the period is virtually the same as in



nonprofit hospitals.<sup>1</sup> In 1966, State and local government hospital expenses averaged \$49—\$4 more per day than nonprofit hospital expenses.

State and local government hospitals also have the lowest profit rates of any of the three types of hospitals—incurring net income losses in each year of the period. Although State and local government revenues do not cover total expenses, it is interesting to note that even State and local government hospitals have revenues in excess of out-of-pocket expenses (expenses other than depreciation). Cash flow of State and local government hospitals averaged 1.65 percent of revenues over the 5-year period (see chart 2).

### Hospital revenues and expenses by bed size

Tables 5 and 6 present revenue and expense data for five bed-size categories: 6 to 99 beds, 100 to 199 beds, 200 to 299 beds, 300 to 499 beds, and 500 or more beds. As indicated in the tables, hospital expenses per day of hospital care increase uniformly with bed size, increasing in 1966 from \$38.09 for hospitals with 6 to 99 beds to \$57.33 for hospitals with 500 or more beds. More surprising than the tendency for larger hospitals to have higher costs is the more rapid *rate of increase* of expenses in larger hospitals. Expenses per patient day increased 36 percent over the period in the largest hospitals, compared with a 27-percent increase in hospitals with 6 to 99 beds.

Several explanations for these trends are possible: (1) larger hospitals may be located primarily in large metropolitan areas with higher and more rapidly rising wage levels (however, increases in average earnings by bed size as shown in table 23 suggest that this is not an important factor); (2) there may have been an increase in specialization over the period, with larger hospitals becoming more and more responsible for the care of difficult cases; (3) most State and local government hospitals are large hospitals, so some of the higher costs of large hospitals may be attributable to the different mix of hospital types (the line of causation could conceivably run the other way—State and local government hospitals may have higher costs because they tend to be larger hospitals);<sup>2</sup> (4) high hospital costs may primarily reflect sophisticated equipment and technology such as larger hospitals are more likely to acquire; or (5) large hospitals may have much greater increases in utilization by outpatients, so that patient days tend to understate their growth relative

<sup>1</sup> This finding contrasts with American Hospital Association data contained in *Hospitals Guide Issues*. Typically, those data show State and local government hospitals' expenses about \$3 a day below those of nonprofit hospitals. For a discussion of the reasons for this difference in findings, see appendix B.

<sup>2</sup> The sample response rate was too low to permit examination by bed size within controls.

to smaller hospitals and hence to overstate rise in cost per "true" unit of output (this bias is investigated in the following sections).

Although average revenues per patient day also increase with bed size, they do not keep pace with increases in expenses. Consequently, hospitals with fewer than 300 beds have higher net incomes per day than larger hospitals. Table 6 presents net income and cash flow as percentages of total revenue and plant assets for hospitals of the various bed sizes. Cash flow as a percent of total revenue ranged from 8.5 for hospitals with 6 to 99 beds to 1.4 for hospitals with 500 or more beds.

Several factors may account for the lower ratio of prices to average costs in larger hospitals. Large hospitals in a metropolitan area may be constrained from charging higher prices by competition from smaller hospitals in the area. Although the large hospital may be able to charge an absolutely higher price than a smaller hospital in the same area because it provides higher quality care or because it offers a wider range of services, the price differential may not be sufficient to cover the cost differential. Another related possibility may be the tendency for the small hospital to be located in a sparsely populated or rural area in which it is the only hospital. The lack of competition may permit the smaller hospital to charge higher prices in relation to costs. It should also be noted that the greater preponderance of State and local government hospitals in the larger size categories may account for the somewhat lower profits of larger hospitals.

### **Utilization of hospital services**

Most theories of inflation are concerned with rates of increase in average costs or prices, but some theories have emphasized the growth in utilization of hospital services as an important contributor to inflation in total hospital costs or expenditures. Some theories emphasize the role of insurance in greatly increasing the number of hospital admissions, reducing incentives for rapid discharge from the hospital, and favoring inpatient care (which tends to be covered by insurance) over outpatient care (which is not as well covered by insurance). Other theories emphasize that hospitals have increasingly substituted for other forms of medical care—such as the use of hospital emergency rooms in place of physician visits to the home. Several policy suggestions have been aimed at offsetting some of the undesirable changes in utilization of hospital services that are believed to have occurred. These include the establishment of utilization review committees to act as watchdogs on unnecessarily long hospital stays and moves toward more comprehensive insurance coverage which, it is hoped, will encourage the substitution of less expensive outpatient care for inpatient care.

A glance at table 7 reveals that community hospitals have experienced only moderate increases in inpatient services. Admissions per capita in-

creased by only 5 percent over the period although patient days increased at a somewhat higher rate (9 percent). Beds per capita did not quite keep pace with the increase in patient days, so occupancy rates increased slightly from 77.7 percent to 78.7 percent.

The most striking change in utilization occurred in outpatient visits. Outpatient visits increased from 382 per 1,000 population in 1962 to 466 in 1966—a 22-percent increase. Several studies have noted this growth and have attempted to explain its cause.<sup>3</sup> Factors frequently suggested to be important include: (1) growing insurance coverage for emergency room services; (2) tightening of hospital occupancy rates, inducing physicians to treat more patients on an outpatient basis; (3) decline in physician visits to the home; (4) unavailability of private physicians outside of office hours; (5) increasing concentration of low-income groups in central city areas, accompanied by movements of physicians out of those areas; (6) increased mobility of the population, which frequently leaves individuals without a personal physician to turn to for medical care; and (7) change in the practice of medicine, which requires extensive laboratory and X-ray equipment only available in hospitals.

Since the outpatient component of hospital care has been increasing in relative significance, deflating hospital expenses by the quantity of inpatient services provided tends to overstate the rise in hospital expenses. Deflating expenses by an output measure combining both inpatient and outpatient care yields an increase in total expenses per unit of adjusted output of 29.4 percent—from \$32.13 in 1962 to \$41.59 in 1966.<sup>4</sup> This is a somewhat lower increase than the 30.2-percent increase in total expenses per patient day.

In summary, increases in utilization of inpatient services per capita have been quite moderate and cannot be blamed for a significant portion of hospital inflation. Increases in outpatient visits, on the other hand, have been quite marked, so some of the increase in *total* hospital costs may be attributable to a widening of the role of the hospital as a primary source of medical care, replacing care formerly provided by private physicians.

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<sup>3</sup> For a multivariate regression analysis of the determinants of demand for hospital outpatient care, see Karen Davis and Louise B. Russell, "The Substitution of Hospital Outpatient Care for Inpatient Care," *Review of Economics and Statistics*, Vol. 54, No. 2 (May 1972). For a survey of numerous case studies of individual hospital outpatient and emergency departments, see Karen Davis and Louise B. Russell, "The Demand for Hospital Outpatient Services," mimeographed, 1971.

<sup>4</sup> The adjusted output measure is the same as that used by the American Hospital Association. If the average revenue of an outpatient visit is one-fourth the average revenue of an inpatient day, an outpatient visit is considered to be the equivalent of one-fourth of an inpatient day. Total expenses are then divided by equivalent inpatient days. See *Hospitals Guide Issue*, August 1, 1969, pp. 466-67 for additional details.



## Utilization of hospital services by type of control

Trends in utilization of hospital services by type of control reveal much the same pattern as that of all community hospitals—inpatient services per capita increased moderately while outpatient services per capita increased much more rapidly. Some redistribution of services among types of hospitals, however, did occur. As shown in table 8, utilization of for-profit hospitals increased more rapidly than that of either nonprofit or State and local government hospitals, so at the end of the period a slightly greater proportion of hospital days of care were provided by for-profit hospitals. Patient days in State and local government hospitals declined somewhat relative to those in nonprofit hospitals.

The effect on hospital costs of this redistribution of utilization among types of hospitals, therefore, tends to lower cost somewhat from what it would have been had the composition remained unchanged—utilization increased relatively in lower-cost for-profit hospitals and declined relatively in higher-cost State and local government hospitals. The aggregate effect on average costs, however, is quite small. If the proportion of patient days provided in each type of hospital had been the same in 1966 as it was in 1962, total operating expenses per patient day of all community hospitals in 1966 would have been \$44.88 instead of \$44.79.<sup>5</sup>

## Utilization of hospital services by bed size

Shifts in utilization of services among hospitals of different sizes were more extensive than the shifts that occurred among hospitals of different types of ownership control. Patient days per capita in hospitals with 300 or more beds increased 16 percent over the period, compared with only a 4-percent increase for hospitals with fewer than 300 beds. This may reflect a change in medical technology which requires greater use of specialized facilities commonly available only in larger hospitals. On the other hand, it may be a demand-induced shift—with rising insurance coverage and reduced out-of-pocket costs to the patient, the patient prefers to be treated in the larger, higher-cost (and supposedly higher-quality) hospital.

Whatever the cause for the change in the distribution of hospital services among hospitals of various sizes, since larger hospitals tend to have higher costs, a small portion of hospital inflation can be traced to this shift. If the proportion of patient days provided in each size hospital had been the same in 1966 as it was in 1962, total expenses per patient

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<sup>5</sup> This calculation involves the assumption that average expenses per patient day of each type of hospital control would have been the same with either distribution of inpatient utilization. Operating expenses exclude minor expenses incurred in the provision of nonpatient services and are somewhat lower than total expenses per patient day (see table 10).

day of all community hospitals in 1966 would have been \$44.55 instead of \$44.79.<sup>6</sup>

## Summary

Principal findings of this review of hospital revenues, expenses, and utilization of services include:

1. Hospital revenues have increased slightly faster than expenses (particularly out-of-pocket expenses). Revenues per patient day increased 30.3 percent from 1962 to 1966, while expenses per day increased 30.2 percent.

2. For-profit hospitals make the highest rates of return (with a 17.9-ratio of cash-flow to plant assets in 1966); nonprofit hospitals follow (5.8 percent); with State and local government hospitals earning the lowest return (0.8 ratio of cash-flow to plant assets in 1966).

3. Small hospitals earn higher rates of return than large hospitals (cash-flow was 7.1 percent of plant assets in 1966 for hospitals with 6 to 99 beds, compared with 0.8 percent for hospitals with 500 or more beds).

4. Expenses and revenues have risen more rapidly in large than in small hospitals, and more rapidly in for-profit than in nonprofit hospitals.

5. Increases in utilization of hospital inpatient services have been quite moderate, while use of outpatient services has increased very rapidly. Adjusting output for growth in outpatient visits reduces the growth in average costs per adjusted patient day to 29.4 percent over the period.

6. There has been some shift toward greater utilization of large hospitals, but this has had little effect on average costs.

Although these aggregate data are not too useful in choosing between various theories of inflation, they are suggestive in several respects. First, the growth in net income over the period suggests that prices are not simply equated with costs (or vice versa). Various theories of inflation which imply an equality of the two should at least be modified to include lagged responses. Second, changes in the composition of utilization among different size hospitals have not accounted for any substantial portion of inflation. Third, there have been no excessive increases in hospital admissions or days of care—although the excessive-utilization theory of inflation may apply to ancillary hospital services or to an increase in excessively high quality care. There is some evidence of a shift to greater use of large, more expensive hospitals. Fourth, the expanded-scope-of-hospitals theory of inflation is substantiated to some extent by the big increase in utilization of hospital outpatient services. Fifth, for-profit hospitals had an even greater increase in average cost than nonprofit hospitals—shedding some doubt on theories of inflation based upon increasing inefficiency in nonprofit hospitals. Instead, the similar experience of all types of hospitals suggests factors that are common to all hospitals—such as demand-pull inflation or technological change.

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<sup>6</sup> Again, the assumption is made that average expenses per patient day for each size hospital would have been the same with either distribution of inpatient utilization.

## IV. LABOR AND CAPITAL COMPONENTS OF HOSPITAL INFLATION

SINCE SOME THEORIES of hospital inflation are based upon a labor cost-push model while others emphasize wasteful capital expenditures, some insight into the validity of these theories for the early 1960's can be obtained by decomposing total hospital expenses into factor input expenses. Several types of information are useful in determining the potential magnitude of these sources of inflation. First, information on the relative importance of labor and capital expenses should provide some perspective on the relation between increases in factor costs and overall hospital costs. Secondly, it is important to know how much of the rise in factor expenses represents an increase in the price paid for inputs and how much represents an increase in the quantity of inputs used in the provision of a day of hospital care. Finally, it is important to know whether the types of labor and capital inputs used have changed over time. This section, therefore, will explore data on labor and capital expenses, prices, and quantities of inputs per day of hospital care, and the composition of labor force, beds, and plant assets.

Questions to be addressed include:

1. How much of the increase in hospital costs is attributable to an increase in the prices paid for inputs and how much of the increase reflects an increase in quantities of inputs used to provide a day of care?
2. Have labor expenses risen more rapidly than other types of expenses?
3. Are increases in labor expenses primarily caused by increases in labor inputs per day of hospital care or by increases in earnings of hospital employees?
4. Has the skill composition of the hospital labor force increased or declined over the period?
5. Which types of hospital wages have increased most rapidly over the period?
6. Have the quantities and types of capital inputs used in the provision of a day of hospital care changed over the period?
7. Does the use of labor and capital inputs vary markedly by type of hospital ownership control?
8. Do small hospitals use a different mix of labor and capital inputs than large hospitals?

## Major labor and capital components of hospital expenses

Operating expenses may be decomposed into payroll expenses; depreciation, interest, and rent expenses; and other operating expenses consisting primarily of supplies, food, utilities, drugs, and linen.<sup>1</sup> Table 10 indicates that capital expenses have increased much more rapidly over the period than other types of expenses—with depreciation, interest, and rent per patient day increasing 52 percent, compared with an increase of 28 percent in payroll expenses. Other operating expenses per patient day increased by 32 percent. The slower rise in payroll expenses led to a decline in the proportion of all expenses which are labor expenses from 62 percent in 1962 to 61 percent in 1966. Capital operating expenses, while a relatively small component of operating expenses, increased from 4.6 percent of all operating expenses in 1962 to 5.4 percent in 1966.

Although these trends in factor expenses disprove the allegation that rising hospital costs are merely a reflection of rising labor costs, labor expenses still represent a sizable portion of hospital costs and warrant deeper examination. In particular, it would be useful to know how much of the 28-percent increase in payroll expenses per patient day stems from an increase in average wages and how much stems from use of more employees per day of care. Table 11 indicates that about three-fourths of the increase was caused by an increase in average annual earnings of hospital employees, while one-fourth of the increase was caused by an increase in the number of employees per day of care.

Average annual earnings of hospital employees increased from \$3,176 in 1962 to \$3,816 in 1966—a 20-percent increase. Although these salaries are quite low, and few would call a wage increase at such a low level excessive, these increases are higher than wage increases in other industries. For example, average weekly earnings of retail trade workers increased by only 13 percent over the same period.<sup>2</sup>

Also in contrast to other industries, hospitals have increased the number of employees per unit of output over the period. Full-time equivalent employees per daily census increased by 6 percent from 2.46 in 1962 to 2.61 in 1966. There are several possible explanations for the increase in labor inputs per patient. It may represent a decline in hospital efficiency (or a decline in labor productivity), but a more plausible explanation is that the nature of hospital care has changed. This could result from a change in technology which requires additional labor, from an increase in the quality of care provided, or from a change in the range of services offered by hospitals. Regardless of the underlying reason for the increase in labor inputs, it is important to understand that in hos-

<sup>1</sup> Total operating expenses differ slightly from total expenses since some nonoperating expenses such as fund-drive expenses are included in total expenses.

<sup>2</sup> *Economic Report of the President*, 1971, table C-30.



pitals, unlike other industries, productivity gains cannot be relied upon to offset increases in wages. Instead, increases in labor inputs per unit of output add to the increases in wages for an even higher rate of increase in labor expenses.

Although labor expenses represent a major portion of hospital expenses, capital expenses have also been the focus of much concern. One theory of hospital inflation pins the blame for rising costs on the desire of hospital administrators to acquire "excessive" capital equipment. In fact, capital expenses have increased quite markedly. Depreciation, interest, and rent expenses per patient day increased 52 percent over the period. Plant assets per day of hospital care increased by 26 percent over the period. Unfortunately, a good measure of physical capital is unavailable. Increases in plant assets represent increases both in prices of capital goods (or historical cost of assets) and in the physical quantity of capital. Plant assets also do not reflect the extent of rented capital. In order to derive a measure of physical capital, an index of capital cost is constructed by assuming that capital costs increased at the same rate over the period as the high-grade municipal bond interest rate (a 20-percent increase<sup>3</sup>). Using this measure of the price of capital services, an index of physical capital is constructed by deflating total capital expenses per patient day by the price of capital. This procedure yields an increase in physical capital inputs per daily census of 26 percent over the period—the same as the increase in plant assets per day of care.

Other operating expenses per patient day increased by 32 percent over the period. Although the exact composition of these expenses is unknown, they consist primarily of supplies (including disposable items such as surgical gowns, syringes, and thermometers), food, utilities, drugs, and linen. If the composite average price of these commodities moves similarly to the consumer price index, a physical measure of other inputs can be constructed by deflating other expenses per patient day by the consumer price index. Using this procedure, other inputs per patient day increased by 23 percent from 1962 to 1966.

These trends in physical inputs and prices of inputs are summarized in table 12. An aggregate price index is constructed by weighting the prices of each of the factor inputs by the proportion of expenses represented by that factor in 1964.<sup>4</sup> An aggregate physical input index per patient day is also constructed using the same weights. The overall annual increase of 6.8 percent in operating expenses per patient day may then be decomposed into a 3.8-percent annual increase in the prices of hospital inputs, and a 3.0-percent annual increase in the quantities of inputs used in the provision of a day of hospital care.

<sup>3</sup> *Economic Report of the President*, 1971, table C-57.

<sup>4</sup> Weights are .615 for payroll expenses, .049 for capital expenses, and .336 for other expenses.

## Major labor and capital components of hospital expenses, by type of control

The theories of hospital inflation which are based upon wasteful capital expenditures or excessive wage payments are believed to apply primarily to nonprofit hospitals. For-profit hospitals are assumed to maximize profits and minimize the cost of producing any given level of output. For-profit hospitals, therefore, will not use excessive amounts of inputs to produce any given level of hospital care, nor will they engage in "philanthropic" wage behavior (paying labor more than their opportunity cost). It is interesting, therefore, to contrast labor and capital expenses by type of hospital to determine if the hospitals differ markedly in the quantities of factor inputs used in the provision of hospital care and the prices they pay for factor inputs. Table 13 presents trends in labor and capital expenses per patient day and the percentage distribution of operating expenses among labor, capital and other expenses. Table 14 presents trends in full-time equivalent employees, average annual earnings of employees, and plant assets by type of hospital. Table 15 summarizes these trends by presenting the annual average rates of increase of the components of hospital costs by type of hospital.

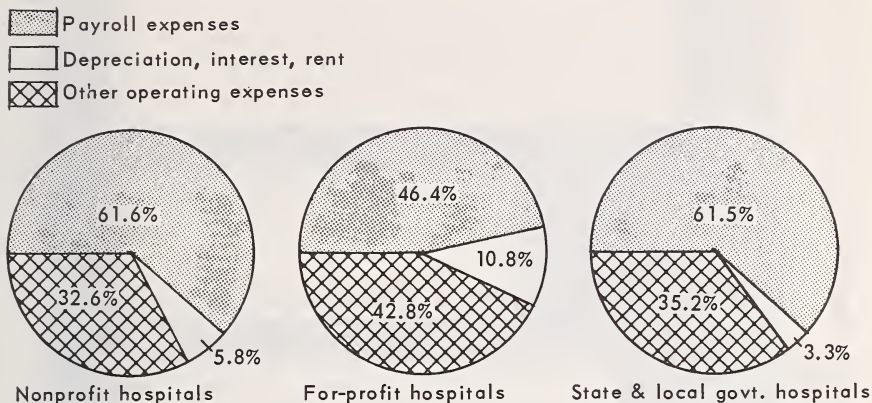
For-profit hospitals have the highest capital costs per patient day of the three types of hospitals, and these expenses have increased most rapidly over the period from 1962 to 1966. Since for-profit hospitals in general do not devote more capital inputs per day of care (plant assets per daily census averaged \$22,662 in nonprofit hospitals and only \$8,667 in for-profit hospitals, see table 14), the higher capital expenses of for-profit hospitals must be attributable to: (1) a greater tendency of for-profit hospitals to borrow funds for capital expansion so that interest expenses are greater, (2) a greater tendency to report depreciation expenses since these expenses may be deducted in calculating tax payments, (3) a greater tendency to use accelerated-depreciation methods of reporting depreciation, or (4) a greater tendency to rent some capital facilities.

Payroll expenses represent only 46 percent of for-profit expenses, compared with 62 percent for nonprofit and State and local government hospitals (see chart 3). In 1966, payroll expenses per patient day were \$11 lower in for-profit hospitals than in nonprofit hospitals (\$16.38, compared with \$27.48). If nonprofit hospitals and State and local government hospitals incurred the same payroll expenses per patient day as for-profit hospitals, total operating expenses per patient day would be virtually identical for the three types of hospitals.

A glance at table 14 reveals that for-profit hospitals not only use fewer employees per day of care but also pay a lower average salary. They employed 2.01 employees per daily census, compared with 2.57 in nonprofit hospitals and 2.87 in State and local government hospitals in 1966. That is, State and local government hospitals devote 43 percent



Chart 3—Distribution of hospital operating expenses by factor inputs and by type of control, 1966



more labor inputs per day of hospital care than for-profit hospitals. As shown in chart 4, for-profit hospital annual earnings averaged nearly \$1,000 below those of nonprofit hospitals in 1966 (\$2,978 versus \$3,905).

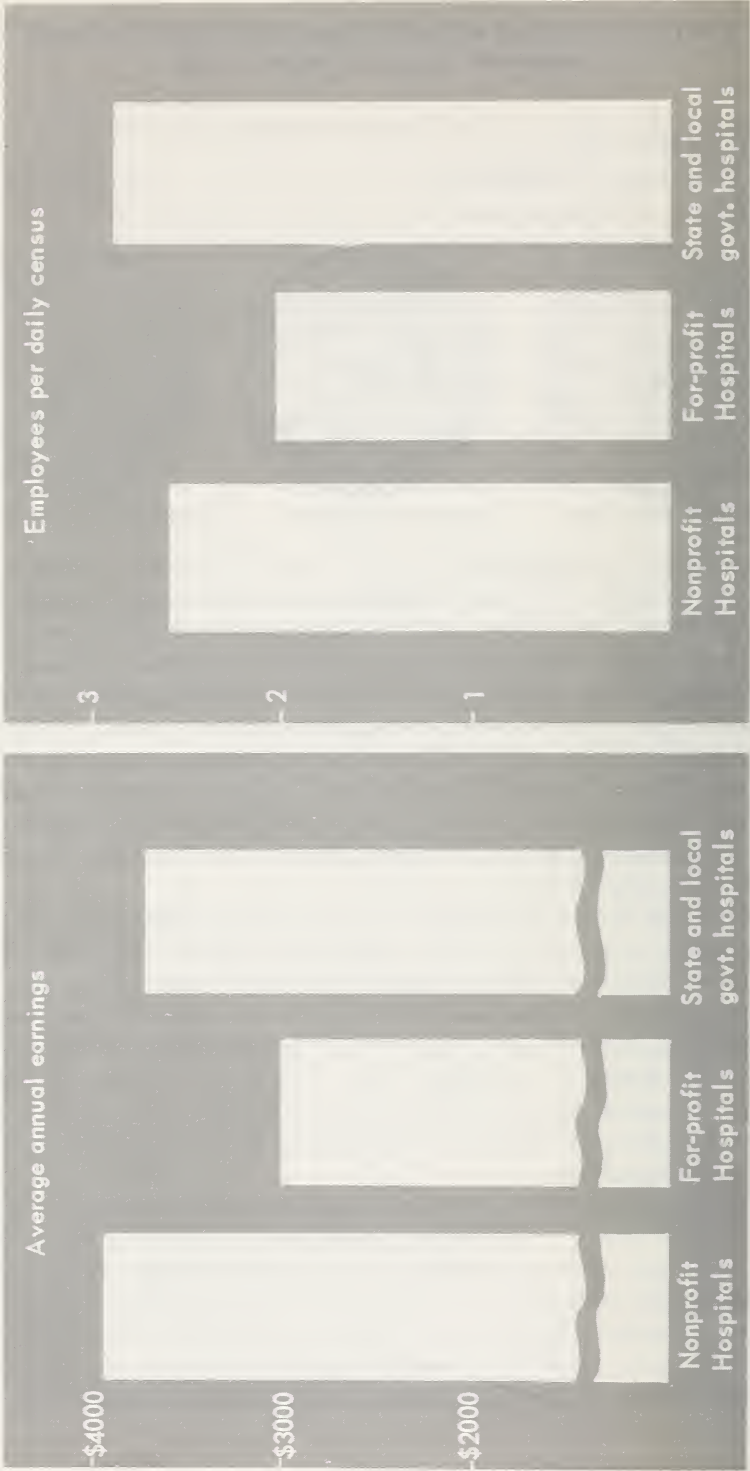
These sizable differences, both in quantities of labor employed in the provision of hospital care and in average wages paid, lend some credence to the argument that nonprofit hospitals pay unnecessarily high wages and employ excessive quantities of labor. However, many factors may explain these differences; for instance, for-profit hospitals may treat simpler cases requiring fewer personnel and lower skill levels, they may be located in areas with lower prevailing wage levels, or they may provide a lower quality of care.

Although for-profit hospitals employ substantially fewer employees per day of care and pay lower wages than nonprofit hospitals, the percentage increase in these components of labor expenses has been somewhat higher in for-profit hospitals than in nonprofit hospitals. The differences, however, are fairly small. Earnings increased 23 percent in for-profit hospitals, compared with a 21-percent increase in nonprofit hospitals; employees per daily census increased 7.5 percent over the period in for-profit hospitals, contrasted with a 6.6-percent increase in nonprofit hospitals.

Table 15 summarizes trends in physical inputs and prices of inputs by ownership control. The same procedures described in the preceding section were used to construct the capital and other input quantity indexes. The high-grade municipal bond rate used as a measure of the price of capital services is probably less appropriate for for-profit hospitals than for nonprofit and governmental hospitals.

Increases in physical inputs per day of care again account for a sub-

Chart 4—Average annual hospital employee earnings and employees per daily census by type of control, 1966



stantial portion of increases in total operating expenses per patient day. Operating expenses per patient day in for-profit hospitals increased 7.9 percent annually. Of this, 4.1 percent represented an increase in physical inputs while the remaining 3.6 percent represented an increase in the price of inputs. State and local government hospitals also had a slightly higher rate of increase in inputs per day of care than in prices of inputs (3.3 percent increase in factor inputs per day and 3.4 percent annual increase in prices of inputs). Increases in prices of inputs were relatively more important in nonprofit hospitals. The 6.8-percent annual increase in overall average costs was composed of a 3.9-percent increase in factor prices and a 2.9-percent increase in inputs per day of care.

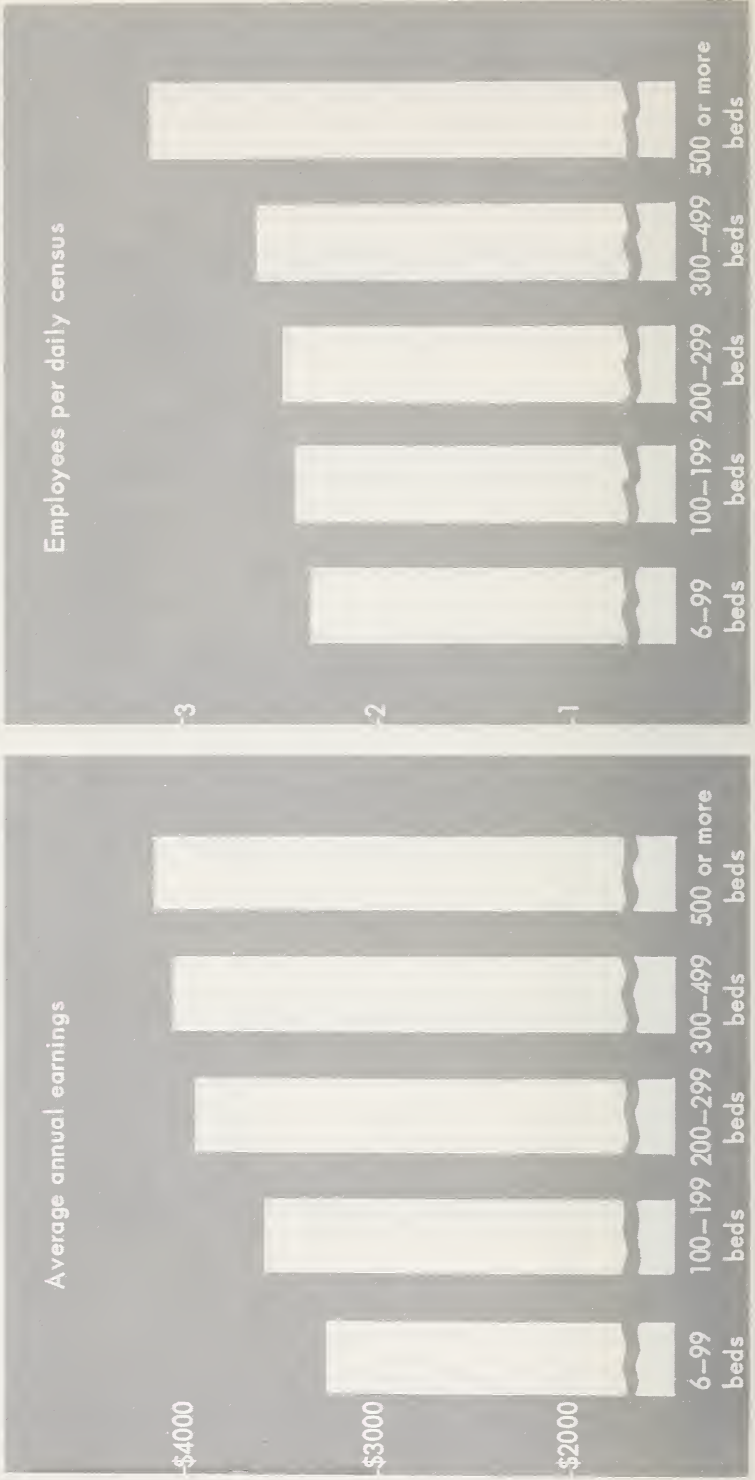
### **Major labor and capital components of hospital expenses, by bed size**

Tables 16 and 17 present trends in labor and capital expenses, quantities of factor inputs, and average earnings by bed size of hospital. Differences in expenses by size of hospital could reflect the existence of economies or diseconomies of scale in the provision of hospital services. As is well known, however, larger hospitals tend to treat more complex types of cases and more difficult cases of a given type of case (e.g., cases requiring cardiac intensive care, open-heart surgery, burn therapy, or radiation therapy). It is impossible without a model of hospital cost determination and appropriate data on all important explanators of hospital costs to separate any differences in hospital costs attributable strictly to size from those attributable to other factors.

The data presented, however, do give some indication of the magnitude of differences in the cost of providing hospital care in the various size hospitals. Capital expenses per patient day do not seem to vary systematically with bed size of hospital. Payroll expenses per patient day, however, increase uniformly as size of hospital increases. Hospitals with 500 or more beds have payroll expenses per patient day averaging \$15 a day higher than hospitals with only 6 to 99 beds (\$35.46 for hospitals with 500 or more beds, compared with \$20.81 for hospitals with 6 to 99 beds, in 1966). Not only do large hospitals have higher payroll expenses per patient day than small hospitals, but these expenses have been increasing more rapidly in large hospitals than in small ones. In 1966, payroll expenses represented 64 percent of all expenses for hospitals with 500 or more beds and only 55 percent of all expenses for hospitals with 6 to 99 beds.

Given the tendency of large hospitals to treat more difficult cases, it is not surprising that they use substantially more factor inputs per day of care provided than do small hospitals. Table 17 reveals that hospitals with 500 or more beds use 35 percent more employees and 44 percent more plant assets per day of care than hospitals with 6 to 99 beds. Aver-

Chart 5—Average annual hospital employee earnings and employees per daily census by bed size of hospital, 1966





age annual employee earnings are also higher in large hospitals (\$4,113 in 1966 for hospitals with 500 or more beds, compared with \$3,246 for hospitals with 6 to 99 beds), probably reflecting either the higher skill-mix of employees in larger hospitals or the tendency for large hospitals to be located in big cities with higher prevailing wage levels (see chart 5).

Table 18 summarizes the trends in factor inputs per day of care and prices of inputs by size of hospital. Annual rates of increase in total operating expenses per patient day are higher in large hospitals than in smaller hospitals—and a greater proportion of the increase in larger hospitals is accounted for by increases in physical inputs. Of the 7.7-percent annual increase in average costs for hospitals with 500 or more beds, 4.1 percent represents an increase in factor inputs per day of care. In contrast, of the 6.0-percent annual increase in average costs in hospitals with 6 to 99 beds, only 2.6 percent is the result of an increase in inputs per day of care.

### Distribution of labor expenses by type of employee

One of the reasons frequently advanced for rising labor costs is the increasing tendency of hospitals to hire a more highly skilled labor force.<sup>5</sup> Technological change resulting in more complex methods of treatment is cited as the primary reason for the upgrading of the hospital labor force. Others make the reverse argument and contend that a shortage of highly skilled labor has caused hospitals to make greater use of less highly skilled labor.<sup>6</sup> Unfortunately, virtually no information has previously been available on a nationwide basis as to the composition of hospital payroll expenses by type of employee. It has been difficult, therefore, to determine accurately if the hospital skill-mix has changed in either direction. This survey provides, for the first time on a nationwide basis, breakdowns of labor expenses over a period of time for five employee classifications: administrative employees, dietary employees, household and property employees, professional patient care employees, and a residual category covering primarily nonprofessional patient care employees and those professional employees not covered by the above categories. Since the residual group covers a wide variety of employees, most of the analysis will concentrate on trends in the four major occupational classifications.

Several different types of evidence on changes in hospital labor force skill-mix can be presented with these data. First, percentage increases in personnel of the various types can be contrasted to determine which

<sup>5</sup> See, for example, U.S. Department of Health, Education, and Welfare, *A Report to the President on Medical Care Prices* (February 1967), p. 29.

<sup>6</sup> Feldstein presents some evidence which indicates that the skill level has actually declined in *The Rising Cost of Hospital Care*, chapter 5.



types of personnel have increased the most rapidly. Second, increases in earnings of employees within each category can be compared to determine which types of employee earnings have been the primary force behind inflation in overall earnings. This information will also shed some light on the contention that rising wage levels are the result of rising wages in traditionally low-paid hospital occupations. Finally, an index of average earnings can be constructed holding the composition of the labor force constant. In this way, increases in actual earnings can be compared with how much earnings would have increased if the composition of the labor force had remained the same.

The occupational classifications provided in the survey are not perfectly suited for testing the hypothesis that the level of the skill-mix of hospital employees has increased since it is possible that the skill levels within each broad employee classification have changed. However, it is possible to determine if the rising wage level is primarily attributable to a shift from less technical to more technical occupations.

Trends in the number of employees per day of hospital care by occupational classification indicate that there has been a shift to more technical occupations. The biggest increases in the four major occupational classifications came in professional patient care employees (increasing from 1.45 to 1.55 employees per day of care as shown in table 19), administrative employees, and other employees. The number of the dietary and the household and property employees per day of hospital care remained constant over the period.

For the two more highly skilled employee classifications (administrative and professional patient care) the earnings pattern was mixed. Professional patient care employee earnings rose rapidly over the period (23 percent) while administrative employee earnings were virtually constant over the period. This may reflect an expansion of administrative personnel to include more clerical personnel, so the higher salaries of the hospital administrator and his assistants are increasingly diluted over the period by an expansion in lower-paid administrative personnel. The increase in professional patient care earnings, on the other hand, may reflect an addition of more highly skilled employees such as more physicians on the hospital staff.

Dietary employees and household and property employees, while near the bottom of the wage ladder, had the greatest percentage increases in annual earnings (25 percent for dietary employees and 24 percent for household and property employees). This provides some substantiation for the claim that part of the increase in wage levels represents an increase in the wages of low-paid workers.

These trends in number of employees and average earnings by occupation are combined in the data on payroll expenses presented in table 20. By far the most rapid increase in payroll expenses has been in the pro-

fessional patient care category with expenses per patient day increasing 32 percent over the period. All other employee categories declined as a proportion of payroll expenses over the period, while professional patient care payroll expenses increased from 63.6 percent of all payroll expenses in 1962 to 65.6 percent in 1966.

The effect of a shift in the composition of employees toward higher-wage occupations may be summarized by contrasting the actual increase in average earnings with the increase that would have occurred had the composition of the labor force remained unchanged. The simple unadjusted index relating average earnings in a given year to average earnings in the base year is given by:<sup>7</sup>

$$W_{1t} = \frac{\bar{W}_t}{\bar{W}_{62}} = \frac{\sum W_t^i L_t^i / \sum L_t^i}{\sum W_{62}^i L_{62}^i / \sum L_{62}^i}$$

where  $W^i$  is average annual earnings of  $i$ th type of employee and  $L^i$  is full-time equivalent employees of the  $i$ th type. An adjusted earnings index which determines how much wages would have risen over the period if the hospital had continued to hire the same labor force composition during the period that it hired at the beginning of the period is given by:

$$W_{2t} = \frac{\sum W_t^i L_{62}^i}{\sum W_{62}^i L_{62}^i}$$

If the hospital has switched to a higher skill-mix over the period, the unadjusted wage index will rise more rapidly than the adjusted wage index. As shown below, the unadjusted wage index rose slightly faster

#### Annual average earnings indexes, 1962-66

[1962 = 100]

Year	Unadjusted index, $W_{1t}$	Adjusted index, $W_{2t}$
1962.....	100.0	100.0
1963.....	104.4	104.4
1964.....	108.2	108.0
1965.....	112.6	112.0
1966.....	120.2	120.0

than the adjusted index, indicating that the skill-mix, if anything, has risen slightly.

These findings are at variance with those of M. Feldstein based upon hospital employee data from surveys of 15 to 20 major metropolitan areas in 1963 and 1966.<sup>8</sup> Feldstein found that the adjusted index grew

<sup>7</sup> Alternatively, the index could be defined in terms of employment at the end of the period. Calculations on that basis yielded the same results—the unadjusted wage index rose slightly faster than the adjusted index.

<sup>8</sup> *The Rising Cost of Hospital Care*, chapter 5.

more rapidly than the overall index, indicating a downgrading of the average skill level. Feldstein's employee classifications are somewhat different: professional nursing, technical, clerical, nonprofessional nursing, and housekeeping. The results reported here may differ from Feldstein's either because they are based on all hospitals rather than just major metropolitan area hospitals, or because the skill classifications presented here are not as narrowly defined as in the Feldstein study. It is likely that the employee classifications presented here are less homogeneous with respect to skill level than the occupational classifications used by Feldstein. A shift to more technical occupations accompanied by a slight downgrading of skills within broad occupational classifications would be consistent with both sets of findings.

### **Distribution of labor expenses by type of employee and by type of control**

The general trends in the composition of payroll expenses by employee classification that were noted in the preceding section also hold for the various types of ownership control. The biggest increases in personnel per day of care of the four major occupations were in the administrative and professional patient care categories for all three types of control. Dietary and household and property employees either remained constant or declined slightly in each type of hospital (see table 21).

As noted earlier, for-profit hospitals have fewer employees per day of hospital care than the other two types of hospitals. This relationship holds for all employee categories except administrative where for-profit hospitals have slightly more employees per day of care than nonprofit or State and local government hospitals. Professional patient-care employees represent about the same proportion of all employees in for-profit hospitals as in other hospitals, although the number of professional patient-care employees per day of care is substantially lower (1.18 in for-profit hospitals, compared with 1.54 in nonprofit hospitals, and 1.68 in State and local government hospitals).

The pattern of increases in annual earnings was fairly similar in the three types of controls with the exception of administrative expenses. Administrative earnings increased substantially in nonprofit hospitals, were relatively constant in for-profit hospitals, and declined markedly in State and local government hospitals. Since increases in governmental hospitals' administrative employees were particularly marked over the period, the decline in average administrative earnings undoubtedly reflects a downgrading of the average skill level of administrative employees in State and local government hospitals. Earnings in professional patient care also increased more rapidly than the average of all occupations in all three types of hospitals. Earnings in the dietary occupational classification, one of the lowest average earnings groups, increased more rapidly than in other categories in all three types of hospitals.



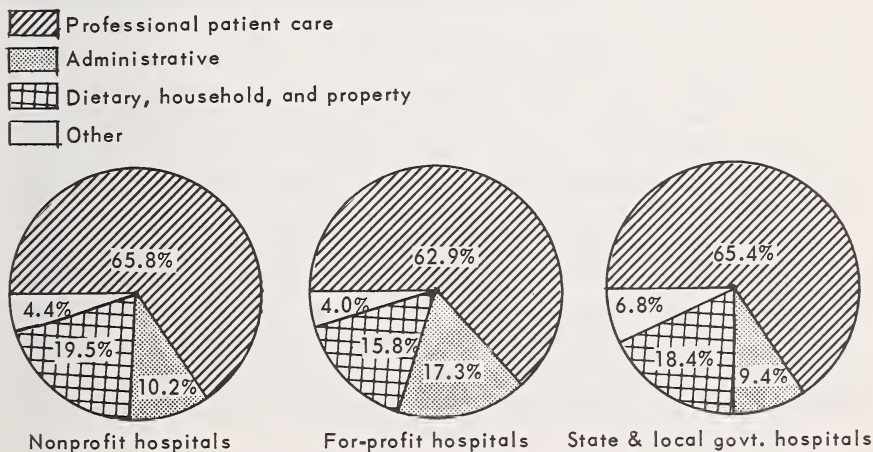
Comparison of the absolute level of earnings among types of hospitals reveals that for-profit hospital employees have the lowest average earnings in all four major employee classifications. Dietary and household and property employees tend to earn relatively more in State and local government hospitals while administrative and professional patient care employees tend to be better paid in nonprofit hospitals.

The trends in average earnings and in number of employees are combined in the payroll expense data reported in table 22. Professional patient-care payroll expenses increased the most rapidly of the various categories for all three types of control. Administrative payroll expenses also increased substantially in nonprofit hospitals. Increases in dietary and household and property payroll expenses tended to be well below average in all three controls.

Professional patient-care payroll expenses—although increasing more rapidly in for-profit hospitals than in other types of hospitals—represent a lower proportion of payroll expenses in for-profit hospitals than in other types of hospitals (62.9 percent in 1966, compared with 65.8 percent in nonprofit hospitals, and 65.4 percent in State and local government hospitals—see chart 6). Administrative expenses per patient day are about the same in all types of controls. For-profit hospitals have lower expenses per patient day in every other labor category, however, so the administrative expenses represent a much higher proportion of for-profit payroll expenses than in nonprofit and State and local government hospitals.

The adjusted earnings index rose slightly less than the unadjusted earnings index in for-profit and State and local government hospitals, as shown below. For nonprofit hospitals, however, the adjusted index was 121.3 in 1966 compared with the unadjusted index of 121.2. The slight

**Chart 6—Distribution of hospital payroll expenses by type of employment by type of control, 1966**



## Annual average earnings indexes, by type of control, 1962 and 1966

[1962 = 100]

Type of control and year	Unadjusted index, $W_{1t}$	Adjusted index, $W_{2t}$
Nonprofit:		
1962-----	100.0	100.0
1966-----	121.2	121.3
For-profit:		
1962-----	100.0	100.0
1966-----	123.0	122.1
State and local government:		
1962-----	100.0	100.0
1966-----	117.4	116.8

shift toward more technical occupations, therefore, was restricted to for-profit and State and local government hospitals.

**Distribution of labor expenses by type of employee and by bed size**

Examination of increases in number of employees of the various occupations by bed size of hospital indicates a shift toward more technical occupations over the period. Administrative and professional patient-care employees per day of care increased the most rapidly in all size hospitals, while dietary and household and property employees were relatively constant. The increases in technical personnel, however, were particularly marked in the largest hospitals. Professional patient-care employees per day of care in hospitals with 500 or more beds increased from 1.61 in 1962 to 1.80 in 1966 (see table 23). The increase in hospitals with 6 to 99 beds was much smaller—from 1.32 professional patient-care employees per day of care in 1962 to 1.39 in 1966. Most of the impetus for greater use of labor inputs per day of care has come from the large hospital sector.

Earnings of hospital employees, while higher in large hospitals, have increased at about the same rate in all size hospitals. Most of the difference in increases in payroll expenses by size of hospital, therefore, has been the result of a relatively greater increase in labor inputs rather than average earnings. The major difference in earnings trends among hospitals was in administrative employee earnings, which dropped markedly in hospitals with 500 or more beds and increased in other size hospitals.

Although small hospitals have much lower labor expenses per patient day than large hospitals, the composition of labor expenses among types of employees does not vary markedly. The only major exception is administrative expenses. Administrative expenses represent a somewhat higher proportion of labor expenses in small hospitals than in large hospitals (13.1 percent of payroll expenses in 1966 for hospitals with 6 to 99 beds, compared with 9.3 percent for hospitals with 500 or more beds). Professional patient-care employee expenses range from 63.4 percent of payroll



expenses (in 1966) for hospitals with 6 to 99 beds, to 67.4 percent for hospitals with 200 to 299 beds.

A shift toward more technical occupations over the period for all hospitals except for those with 200 to 299 beds is also indicated by trends in the earnings indexes. The adjusted salary index in hospitals with 500 or more beds was 116.8 in 1966, compared with an unadjusted salary index of 117.5 as shown below. In hospitals with 6 to 99 beds the un-

Annual average earnings indexes, by bed size of hospital, 1962 and 1966

[1962 = 100]

Bed size and year	Unadjusted index, $W_{it}$	Adjusted index, $W_{it}$
6-99 beds:		
1962 .....	100.0	100.0
1966 .....	117.6	117.2
100-199 beds:		
1962 .....	100.0	100.0
1966 .....	120.8	120.2
200-299 beds:		
1962 .....	100.0	100.0
1966 .....	120.9	121.2
300-499 beds:		
1962 .....	100.0	100.0
1966 .....	120.9	120.4
500 or more beds:		
1962 .....	100.0	100.0
1966 .....	117.5	116.8

adjusted salary index was about the same (117.6) but the adjusted salary index was somewhat higher than in the larger hospitals (117.2). That is, although the skill-mix or relative importance of more technical occupations increased for both size hospitals the shift was probably somewhat greater in larger hospitals.

### Composition of hospital beds and plant assets

At the core of several different theories of inflation is the notion that a large portion of hospital inflation is attributable to acquisition of hospital capital equipment. Rises in costs as a consequence of capital investment are not restricted to capital expenses such as depreciation, but also include labor costs of personnel that must be hired to operate the capital equipment and the costs of materials and supplies. In some theories of inflation, capital accumulation is a desirable phenomenon—merely reflecting changes in medical technology which enable more lives to be saved with new, sophisticated equipment. In other theories of inflation, much of the capital accumulation is depicted as wasteful.

Judgments about the validity of this cause of inflation have been hampered both by an absence of measures of socially optimal capital

investment and by the absence of information on the extent and types of hospital capital investment. In at least this second respect, the survey makes a useful contribution by obtaining data on the composition of hospital plant assets and beds. These data are presented in tables 25 and 26.

The data confirm the allegation that most of the increase in hospital capital has come in acquisitions of hospital capital equipment rather than additional investment in buildings. Rates of increase in major equipment plant assets per day of hospital care were twice as high as rates of increase in building plant assets per day of hospital care. Although buildings still represent the major portion of hospital plant assets, their share of all plant assets declined from 63.9 percent in 1962 to 61.5 percent in 1966.

Expansion in bed capacity was quite moderate. As indicated earlier in table 7, beds per capita did not quite keep pace with increases in days of hospital care over the period (beds per capita increased by 7.3 percent while patient days per capita increased by 8.7 percent over the period). Some interesting changes in the composition of total hospital beds, however, did occur. Total obstetrical beds declined by 2 percent in response to a decline in hospital births. The biggest increases were in intensive-care beds—with number of beds devoted to this purpose increasing from 4,000 in 1962 to 14,000 in 1966.

### **Composition of hospital beds and plant assets by type of control**

Since excessive capital acquisition is believed to be more common for nonprofit hospitals than for for-profit hospitals, comparisons by hospital type are particularly interesting. As shown in tables 27 and 28, quite different patterns of capital acquisition among the three types of hospital did occur.

Major equipment plant assets per day of hospital care increased by 53 percent over the period in nonprofit hospitals—five times as rapid an increase as in for-profit hospitals. The magnitude of this difference lends substantial support to those theories of inflation which emphasize the acquisition of equipment capital by nonprofit hospitals. For-profit hospitals were much more inclined to concentrate capital investment in the expansion of building capacity. Building plant assets per day of care increased 59 percent in for-profit hospitals, compared with 23 percent in nonprofit hospitals. In absolute terms, nonprofit hospitals had over twice as many plant assets per day of care in every category (including buildings) as for-profit hospitals.

For-profit hospitals also devote much less bed capacity to obstetrical beds (typically low-return services, see table 41) and to pediatric beds. Intensive-care beds, on the other hand, represent a slightly higher proportion in for-profit hospitals than in nonprofit hospitals.

## Composition of hospital beds and plant assets by bed size

Large hospitals tend to devote more capital inputs to the provision of a day of hospital care than small hospitals. This is particularly true of equipment and building plant assets. Hospitals with 500 or more beds devoted \$6,405 of equipment plant assets to the provision of a day of hospital care in 1966, while hospitals with 6 to 99 beds used only \$4,621 of equipment plant assets (see table 29).

Rates of increase in the different types of plant assets have not followed particularly uniform patterns. In general, rates of increase have been higher in hospitals with 200 or more beds than in smaller hospitals. This is particularly true of the building and equipment assets.

Small hospitals also reserve a higher proportion of their bed capacity for obstetrical beds than large hospitals, although these proportions have been declining over the period for hospitals of all sizes. Intensive-care beds represent a higher proportion of all beds in the larger hospitals (300 or more beds)—although the number of intensive-care beds has been increasing markedly in all hospitals, including quite small ones.

## Summary

Investigation of the labor and capital components of hospital costs has revealed several important findings:

1. A major part of the growth in hospital costs has been caused by an increase in the quantity of inputs used to provide a day of hospital care. Added to a 3.8 annual percentage increase in the price of hospital inputs is a 3.0 annual percentage increase in inputs per day of care for a total annual increase of 6.8 percent in operating expenses per patient day.

2. Labor expenses have not risen as rapidly over the period as other types of expenses—particularly capital expenses.

3. About three-fourths of the increase in labor expenses is accounted for by increases in average earnings of employees while about one-fourth of the increase represents an increase in number of employees per day of care.

4. There has been some slight shift in the composition of hospital personnel toward more technical occupations such as professional patient-care and administrative employees.

5. The lowest paid occupations (dietary and household and property) have had the biggest percentage increases in annual earnings.

6. Nonprofit hospitals have increased major equipment plant assets per patient day at five times the rate at which for-profit hospitals have expanded equipment capital.

7. For-profit hospitals employ fewer employees per day of care, pay lower annual salaries, and use fewer plant assets per day of care than other types of hospitals.

8. Over half of the inflation in large-hospital costs has resulted from increases in inputs per day of care. For hospitals with 500 or more beds, the 7.7 annual percentage increase in average costs is composed of a 3.4-

percent increase in factor prices and a 4.1 annual percentage increase in physical inputs per day of care.

These findings have the most relevance for theories of inflation based upon factor inputs. Perhaps the most important implication of the findings concerns the role of increased physical inputs. The substantial increase in quantities of physical inputs indicates that a theory of inflation simply based upon increases in factor prices is much too narrow to explain adequately overall hospital inflation. Hospital costs would have increased substantially over the period in the absence of any increases in factor prices. The more rapid rate of increase in nonlabor expenses also indicates the need for a theory of inflation that is more encompassing than strictly labor-oriented theories of inflation.

The sizable differences between for-profit hospitals and other types of hospitals, both in the quantities of labor and plant assets used in the provision of hospital care and in average wages paid, lend some credence to the argument that nonprofit hospitals pay unnecessarily high wages and use excessive labor and capital inputs. A conclusive judgment is impossible, however, without additional information on the types of patients treated in the different types of hospitals, possible labor market differences, and possible differences in the quality of care and range of services provided.

The rapid rate of increase in nonprofit hospital equipment per day of hospital care also substantiates the emphasis in various theories of inflation on capital equipment as a major source of hospital inflation. Before these rates of acquisition of capital equipment can be deemed excessive or wasteful, however, more information on socially desirable hospital investment is required.



## V. TRENDS IN REVENUES AND EXPENSES OF INDIVIDUAL HOSPITAL SERVICES

ANOTHER WAY of viewing hospital operating expenses is to examine growth in expenses of providing various hospital services. This is particularly useful in determining whether the major types of inflation have occurred in the provision of standard room and board services, in the provision of ancillary services (operating room, drugs, laboratory tests, X-rays, etc.), or in the provision of outpatient services.

Viewing expenses from this perspective should also yield additional information relevant to theories of hospital inflation. For example, some theories of inflation emphasize the expanded scope of hospital services while others emphasize advances in scientific know-how which have made it possible to treat more difficult cases. If either of these theories is correct, one would expect a large increase in ancillary service expenses without much change in standard room and board expenses.

In addition to the detailed information on operating expenses for individual services, the survey obtained data on sources of patient revenues. It is possible, therefore, to compare revenues from various ancillary services with the direct costs of providing those services. With the aid of price-cost margins on individual services, the pricing mechanism can be explored. In particular, it can be determined if prices are passively equated to costs of services or whether prices exploit differences in demand elasticities for different services so as to yield higher rates of return on some services than others. This section, therefore, will explore the following questions:

1. Have expenses for routine care increased more or less rapidly than expenses for ancillary services?
2. Have there been any major shifts in sources of hospital revenues over the period?
3. Which prices of ancillary services have the highest markups over costs?
4. Are there major differences in trends in service expenses and revenues by type of ownership control?
5. Is the differential rate of inflation between small and large hospitals, noted in earlier sections, the result of a differential rate of increase in ancillary service expenses or of all services?

## Departmental operating expenses

Table 31 depicts the growth in various departmental costs. Although all operating expenses increased by 50 percent over the period, individual departmental expense increases ranged from 35 percent for dietary and housekeeping expenses to 78 percent for outpatient department expenses. In general, routine costs of providing hospital care such as dietary, housekeeping, plant engineering, nursing, and medical service increased at a less than average rate. Expenses of specialized hospital services increased much more rapidly. Ancillary service expenses incurred by the radiology department and the laboratory department increased 65 percent.

Although ancillary service expenses have been increasing much more rapidly than routine expenses, the latter still constitute a major portion of all expenses. Administrative, dietary and housekeeping, plant engineering, nursing service, and medical service accounted for 62 percent of all operating expenses in 1966. Ancillary service departmental expenses ranged from \$1.82 for pharmacy expenses per patient day to \$3.06 for operating and delivery room expenses per patient day in 1966.

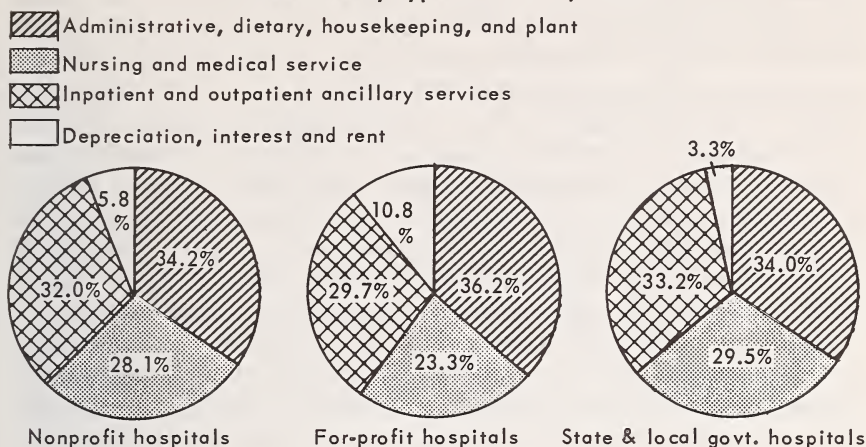
The rapid increase in ancillary service expenses is consistent with several different theories of hospital inflation. Technological change may have greatly increased the need for diagnostic services as additional diagnostic tests have been developed. Advances in radiation therapy may be responsible for the large increases in radiological expenses. It is also possible that the rise in ancillary service expenses may have been induced by increased hospitalization insurance. As more and more individuals obtain hospitalization insurance which covers diagnostic tests while they are hospitalized, physicians may feel less constrained by concern over the patients' financial burden and may order a wider range of tests. Fear of malpractice suits may add to the tendency to overtest. The rise in ancillary service expenses may reflect acquisition of excessive or wasteful capital equipment with concomitant operating expenses. Clearly, the growth of some types of expenses, such as those of the outpatient department, reflects a broadening of the role of the hospital in providing medical care.

It is difficult to reconcile these findings, however, with claims that the primary cause of hospital inflation is an increased demand for amenities such as better food service and more luxurious surroundings. Nor is there any indication that increased nursing service is a prime mover in hospital inflation. The cost-push arguments, at least in the provision of routine services, do not seem to apply.

## Departmental operating expenses by type of control

All three types of hospitals had the same general pattern of increases in departmental operating expenses (see table 32). The biggest increases

**Chart 7—Distribution of hospital operating expenses by type of service by type of control, 1966**



occurred in the radiology, laboratory, and outpatient departments, while increases in standard services such as dietary, housekeeping, and plant engineering were quite modest. Administrative expenses increased slightly faster than average—particularly in for-profit hospitals. Non-profit hospitals experienced a fairly substantial jump in medical service—perhaps reflecting an increase in intern and resident salaries.

For-profit hospitals had the lowest expenses per day in most categories. Notable exceptions were administrative expenses and pharmacy expenses. The high administrative expenses may reflect higher salaries paid administrators rather than additional personnel or less efficient methods of administration. They may also reflect to some degree the failure of for-profit hospitals to exploit potential economies of scale in these expenses since most for-profit hospitals tend to be fairly small. The higher pharmacy expenses may reflect a different type of case-mix requiring more expensive medication—or again economies of bulk purchase may not be available to typically small for-profit hospitals.

Expenses in State and local government hospitals are quite similar to those in nonprofit hospitals (see chart 7). Most categories of expenses run slightly higher in the governmental hospitals, although some ancillary service expenses such as operating room and radiology are slightly higher in the nonprofit hospitals. Outpatient department expenses are particularly important in government hospitals, having increased 62 percent over the period.

#### **Departmental operating expenses by bed size**

Two types of departmental operating expenses (administrative and pharmacy) follow a U-shaped average-cost curve in relation to hospital



bed size—with expenses per day first declining slightly as bed size increases, then rising (see table 33). As noted earlier in the context of for-profit hospitals, small hospitals may be unable to exploit potential economies of scale in administration (because of indivisibilities of administrative staff) and may not receive bulk discounts in the purchase of drugs—thus accounting for the somewhat higher expenses of small hospitals relative to middle-size hospitals. The increase in administrative expenses per day as hospitals become fairly large probably reflects diseconomies of scale and the difficulties of efficiently managing a large hospital. The increase in pharmacy expenses per day, on the other hand, more likely reflects a switch in types of patients, with a greater concentration of seriously ill patients that require extensive medication.

Somewhat surprisingly, economies of scale are not revealed for many standard services such as dietary, housekeeping, and plant engineering. Instead costs per day rise uniformly with bed size and are substantially higher in the largest hospitals than in the smallest hospitals. For example, dietary and housekeeping expenses per patient day in hospitals with 500 or more beds are 42 percent higher than in hospitals with 6 to 99 beds in 1966.

Operating room and radiology expenses per patient day increase only slightly with hospital size. Both types of expenses were only about 30 cents a day higher in the largest hospitals than in the smallest ones in 1966. These expenses, however, are the types of expenses which tend to occur once during a hospital stay rather than on a daily basis. As shown below, operating room, radiology, and laboratory expenses per hospital admission increase substantially with size of hospital. Part of the higher

Various inpatient ancillary service expenses per admission, by bed size of hospital, 1962 and 1966

Expenses and year	6-99 beds	100-199 beds	200-299 beds	300-499 beds	500 or more beds
Operating room expenses per admission:					
1962 .....	\$14.04	\$17.20	\$17.23	\$20.43	\$22.96
1966 .....	17.68	20.96	23.57	27.62	31.06
Radiology expenses per admission:					
1962 .....	\$ 9.32	\$11.28	\$13.06	\$14.18	\$15.76
1966 .....	14.19	15.51	18.36	20.13	25.74
Laboratory expenses per admission:					
1962 .....	\$ 9.32	\$13.04	\$15.00	\$19.05	\$21.28
1966 .....	13.41	17.52	22.09	27.98	32.34

ancillary service expense per hospital admission of larger hospitals undoubtedly reflects a greater complexity of the types of cases cared for in larger hospitals. Since more difficult cases can also be expected to have longer stays, the ancillary service cost per day of hospital care does not vary markedly by hospital size although the ancillary service cost per admission does increase with size of hospital.



There are also some important differences among hospitals of different sizes in the *rates of increase* of individual service expenses. Hospitals with 500 or more beds had approximately the same percentage increase in standard service expenses (including administrative expenses, dietary and housekeeping expenses, plant engineering expenses, and nursing service expenses) as hospitals with 6 to 99 beds. Inpatient ancillary service expenses per patient day, on the other hand, increased 48 percent in hospitals with 500 or more beds, compared with a 22-percent increase in hospitals with 6 to 99 beds. Outpatient expenses per patient day declined slightly in hospitals with 6 to 99 beds, while increasing 52 percent in hospitals with 500 or more beds. Medical service expenses per patient day (mostly intern and resident expenses) also increased much more rapidly in the larger hospitals. Most of the difference in rates of increase between small and large hospitals, therefore, is accounted for by differences in the rates of increase of inpatient ancillary service expenses and outpatient expenses.

### Sources of hospital revenues

Absence of concrete data on hospital revenues has led to widespread acceptance of a number of assertions about hospital pricing and revenue policies, to the effect that: (1) hospital prices are passively determined and simply set at levels sufficient to break even, (2) a sizable portion of hospital revenue comes from philanthropic contributions, (3) room and board charges are the main source of patient revenue, and (4) prices of individual services are simply marked up at a constant proportion of their direct cost.<sup>1</sup>

The data obtained in the survey provide detailed data on sources of hospital revenue so that these assertions can be investigated. Section III revealed that the first assertion was untrue in the early 1960's. The other assertions will be taken up in this section. Table 34 shows the distribution of hospital revenue among patient revenue, contributions, and other revenue (such as earnings on investment, cafeteria sales, and rental of non-patient facilities). It should be noted that since other sources of revenues also generate expenses which are frequently included in operating expenses (such as cafeteria expenses), it is not appropriate to compare patient revenue with operating expenses. Table 35 shows the distribution of gross patient revenues stemming from room and board charges and from charges for various ancillary services. Gross patient revenue con-

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<sup>1</sup> For a discussion of pricing behavior in hospitals, see Edward M. Kaitz, *Pricing Policy and Cost Behavior in the Hospital Industry* (New York: Frederick A. Praeger, 1968). For some evidence that price-cost margins are a reflection of economic conditions, see Karen Davis, "Relationship of Hospital Prices to Costs," *Applied Economics*, Vol. 4 (June 1971), pp. 115-125.

tained in table 35 differs from net patient revenue presented in table 34 in that gross patient revenue represents billed charges—without reduction for reimbursement on the basis of costs and without deduction of bad debts.

As indicated in table 34, patient revenue is the major source of hospital revenue and has been increasing as a fraction of all revenue throughout the period (from 87.6 percent in 1962 to 88.8 percent in 1966). Contributions have represented a fairly small but stable fraction of revenues throughout the period (2.4 percent).

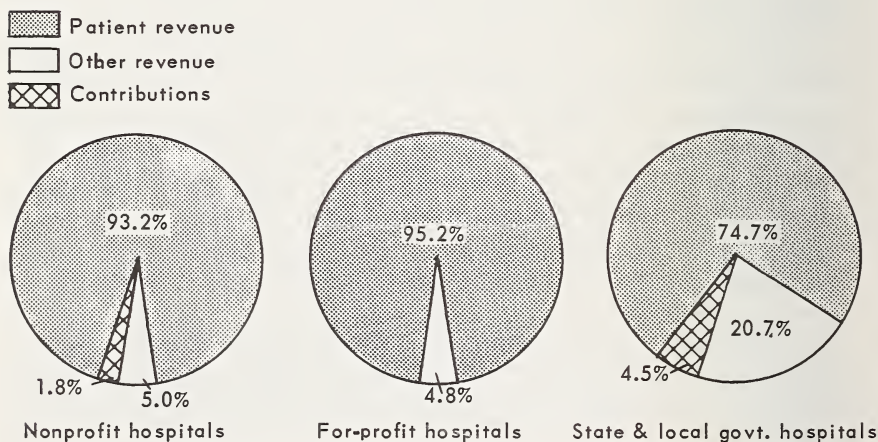
Room and board revenues, while a substantial source of patient revenue, constitute slightly less than half of all patient revenues and this proportion has been declining slightly in recent years. Room and board revenues per patient day increased by 29.7 percent over the period, compared with an increase of 34.7 percent in all patient revenues per patient day. Since the basic room and board charge is used by the Bureau of Labor Statistics as an index of hospital costs, these data indicate that the BLS index may understate increases in hospital costs.

Just as ancillary service operating expenses have increased much more rapidly than standard room and board expenses, revenues of ancillary services have increased markedly over the period. Radiology, laboratory, and outpatient revenues have been the major sources of growth, with operating room and pharmacy revenues increasing fairly slowly.

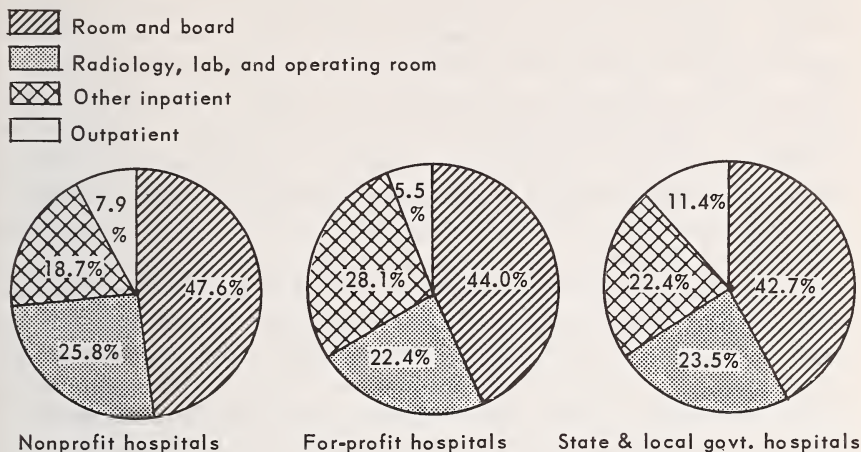
### Sources of hospital revenues by type of control

Examination of hospital revenues by type of hospital (tables 36 and 37) reveals three major differences: (1) State and local government

**Chart 8—Sources of hospital revenue by type of control, 1966**



**Chart 9—Distribution of hospitals' gross patient revenue by type of service, by type of control, 1966**



hospitals are heavily dependent upon nonpatient revenue, primarily funds from governmental units; (2) nonprofit hospitals receive about 2 percent of their revenue from contributions; and (3) for-profit hospitals receive virtually no revenue from contributions (see chart 8). The stereotype of the hospital that is dependent for funds upon charitable contributions or support from governmental units, therefore, is primarily true only of the State and local government hospitals. Both nonprofit and for-profit hospitals generate enough revenue without contributions to more than cover total expenses.

The distribution of patient revenues by type of service is approximately the same for all types of hospitals (see chart 9). In 1966, room and board revenue ranged from 43 percent of patient revenue for government hospitals, to 44 percent for the for-profit hospitals, and 48 percent for nonprofit hospitals. Ancillary service revenues—particularly radiology laboratory and outpatient department—have experienced fairly rapid increases.

### Sources of hospital revenues by bed size

In a competitive market, economic theory predicts that different firms will charge the same price for the same goods, regardless of any differences in costs that the firms may experience. Yet, as reported earlier, revenues per patient day in 1966 vary from \$40 for hospitals with 6 to 99 beds, to \$56 for hospitals with 500 or more beds. Of course, there are many reasons to believe that the equal-price rule of thumb will not apply to the hospital market. First of all, the hospital market is local in nature. If large hos-



pitals tend to be located in large cities while small hospitals tend to be located in rural, sparsely populated areas, price differences between small and large hospitals may exist because of differences between markets in large cities and rural areas. Second, large hospitals may not provide the same goods or service as small hospitals. Quality differentials may exist as well as differences in the range of services offered. Third, the market for hospital services is not usually considered to be perfectly competitive. Information about prices may be unavailable or difficult to estimate in advance, choice among hospitals may be limited, and insurance coverage may reduce the patient's concern about differentials in costs among hospitals.

In view of the many reasons why substantial price differentials could exist, it is almost surprising that in fact net patient revenue per patient day is similar for all size hospitals. In 1966 hospitals with 500 or more beds averaged net revenues only \$4 per day higher than hospitals with 6 to 99 beds (table 38). Even this difference overstates the differential in average price of inpatient care since large hospitals tend to have relatively more outpatient care. Contributions and other revenue accounting for the greater differential in total revenues per patient day are relatively greater for larger hospitals.

Differences in gross patient revenue per patient day by bed size are somewhat greater—\$11 per day (table 39). Since this is not translated into collected revenue, large hospitals must: 1) provide more free or reduced cost care, 2) receive relatively more revenue on a cost-reimbursement basis, or 3) have higher bad debts. For patients who must pay charges, therefore, average price of hospital care may be significantly higher in larger hospitals.

The distribution of patient revenues among types of services does not vary systematically by size of hospital. Room and board revenues in 1966 range from 43 percent of all revenue for hospitals with 500 or more beds to 50 percent of all revenue for hospitals with 100 to 199 beds. Outpatient revenue, however, represents a much larger proportion of revenue for large hospitals (12 percent for hospitals with 500 or more beds compared with 6 percent for hospitals with 6 to 99 beds), while pharmacy revenue is substantially more important for small hospitals (12 percent for hospitals with 6 to 99 beds, compared with 6 percent for hospitals with 500 or more beds).

### **Departmental price-cost ratios**

If hospitals pursue an overall pricing policy of equating prices with average costs without regard to economic conditions, it seems reasonable to assume that they would also equate the price of each service with the cost of that service (with a uniform markup to cover overhead ex-



penses). If, on the other hand, hospitals respond to economic pressures, prices may be higher on services for which the demand is relatively inelastic and lower for services for which the demand is elastic.

Table 40 presents the ratios of patient revenues to direct costs of various ancillary services. Several words of caution are in order. First, the costs are direct costs—that is, they do not include overhead, such as administrative expenses, depreciation expenses, etc. Second, the patient revenue data reflect gross charged revenue rather than actual collected revenue. Third, some hospitals may include some outpatient expenses in inpatient ancillary service expenses, so that inpatient expenses (particularly radiology and laboratory expenses) are overstated.

As shown in chart 10, price-cost ratios range from an average of .89 on delivery room services to an average of 2.05 on pharmacy services for the period from 1962 to 1966. Delivery room revenues do not even cover direct costs. The demand for delivery room services might be expected to be fairly inelastic. Although this is undoubtedly true for the market as a whole, these services are the most likely to be excluded from insurance coverage and families using such services are likely to have lower than average incomes. Given these considerations and the fact that the need for hospitalization is anticipated in advance, it is reasonable to

**Chart 10—Ratio of hospitals' gross patient revenue to direct costs of various services, annual average, 1962–1966**



expect that patients consider price of delivery room services in making a choice among available hospitals. This behavior, combined with declining birth rates, may account for the low returns on delivery room services.

The market demand for drugs is quite different. Drugs used while the patient is hospitalized are covered by most insurance policies. In addition, since prescription drugs retail at high prices relative to costs, hospitals can charge fairly high prices for medication without either arousing the patients' indignation or causing them to obtain drugs from other sources.<sup>2</sup> Through bulk discounts or purchase of drugs on a generic name basis, hospitals can keep their drug cost fairly low.

An attempt was made to relate expenses of routine services to room and board revenues. If all expenses for dietary, housekeeping, laundry, linen, maintenance of personnel, nursing service, nursing education, medical and surgical service, medical record and library, and social service departments are assigned to routine service expenses, the price-cost ratio on routine services averages 1.02 percent over the period. This ratio is in some sense a lower bound on the ratio of revenue to expenses incurred directly in the provision of routine care. In general, demand for hospital care might be expected to be most sensitive to the room and board charge since this charge is simpler to understand and more likely to be quoted. Fairly low price-cost ratios on room and board services, therefore, would be observed if hospitals responded to this elasticity of demand.

### Departmental price-cost ratios by type of control

No marked disparities in price-cost ratios exist on the basis of control (table 41). In general price-cost ratios are higher for nonprofit hospitals than for State and local government hospitals. For-profit hospitals earn higher rates of return on some minor services such as anesthesiology and physical therapy than nonprofit hospitals, but in general for-profit price-cost ratios are also somewhat lower than in nonprofit hospitals. Delivery room price-cost ratios are the lowest for all three types.

The similarity in patterns of price-cost ratios in all three types of hospitals suggests that the hospitals pursue similar pricing policies. A priori one might have expected for-profit hospitals to exploit profit opportunities to a greater degree than nonprofit hospitals, but this evidence does not support the contention that for-profit hospitals maximize profits while nonprofit hospitals price at average cost.

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<sup>2</sup> For current information on prices and rates of return in the drug industry, see *Prescription Drug Data Summary, 1971* (Washington, D.C.: Social Security Administration, 1971). For an interesting expose of drug pricing policies, see Estes Kefauver, *In a Few Hands: Monopoly Power in America* (Baltimore, Md.: Penguin Books, 1965), chapter 1.

## Departmental price-cost ratios by bed size

Differences in price-cost ratios among hospitals of different sizes are somewhat more marked (table 42). In general, small hospitals have higher prices in relation to average costs than large hospitals. This is particularly true of anesthesiology and radiology services. This may reflect a difference between large and small hospitals in methods of reimbursing professional anesthesiologists and radiologists. A possible source of bias, however, may be created by methods of allocating expenses between inpatient and outpatient services. To the extent that some outpatient expenses are included in inpatient radiology and laboratory expenses, inpatient expenses may be overstated—particularly in large hospitals.

## Summary

Viewing hospital costs and revenues from the perspective of individual services helps round out an understanding of the components of hospital inflation. Important findings on trends in individual departmental expenses and revenues include:

1. Increases in expenses of standard routine services such as dietary, housekeeping, plant engineering, and nursing services have been quite moderate while the inpatient ancillary service expenses (particularly laboratory and radiology expenses) and outpatient department expenses have increased markedly over the period.

2. Philanthropic contributions represent a very minor but stable source of hospital revenue. Revenues from other sources (patient revenue and revenues on nonpatient services) more than cover operating expenses in nonprofit and for-profit hospitals.

3. Revenues from room and board charges represent less than half of hospital patient revenues and the importance of this source of revenue has declined slightly over the period with the more rapid increases in ancillary service revenues (particularly, radiology, laboratory and outpatient revenues).

4. Administrative and pharmacy expenses per patient day follow a U-shaped average cost curve while other types of expenses tend to increase uniformly with size of hospital.

5. Most of the greater rate of increase in costs of large hospitals is the result of more rapid increases in inpatient ancillary service expenses, outpatient department expenses, and medical service expenses. Expenses on standard services have increased at approximately the same rate in small as in large hospitals.

6. Price-cost margins on ancillary services range from .89 on delivery-room services to 2.05 on pharmacy services. Price-cost margins exhibit a similar pattern for hospitals of all three ownership types.

These findings convey two important implications for theories of inflation. First, the similar patterns of expenses, revenues, and price-cost margins in the different types of hospitals suggest that sources of inflation

are not unique to nor dependent upon nonprofit ownership of hospitals. Second, the relatively more rapid increase in ancillary service expenses gives some support to those theories of inflation which predict rapidly rising ancillary service costs rather than nursing service expenses or expenses for routine services. Increases in ancillary service expenses could be the result of: (1) an increase in the number of tests performed per hospital admission, (2) a substantial increase in the salaries of laboratory and radiology personnel (perhaps increases in salaries of radiologists and pathologists employed in these departments), (3) a shift to more expensive types of tests and services (such as radiation therapy treatments), or (4) a decline in average productivity of personnel (which might result from increased excess capacity in capital equipment and indivisibilities in hospital personnel). Clearly, a more detailed investigation of the ancillary service expense portion of hospital costs is warranted.



## VI. IMPLICATIONS OF THE TRENDS IN THE PRE-MEDICARE PERIOD

SEVERAL CHARACTERISTICS of hospital inflation in the pre-Medicare period are particularly distinctive and have significant implications for various theories attempting to explain hospital inflation. First, unlike most industries where gains in productivity tend to offset rises in prices of factor inputs, a substantial portion of inflation in the hospital industry results from an increase in the quantities of inputs used in the provision of a day of care. Second, although hospitals are labor-intensive with payroll expenses accounting for about 60 percent of all operating costs, nonlabor costs have increased at a more rapid rate over the period than labor costs. Third, most of the increase in expenses has occurred in the provision of ancillary hospital services rather than in the provision of basic room and board services. Fourth, there has been some shift in the composition of hospital personnel toward the higher-skilled occupations such as professional patient-care employees and some shift in the composition of plant assets toward more major equipment. Fifth, increases in days of hospital care and number of admissions have been quite moderate while outpatient services have been significantly expanded.

Each of these major trends and many of the lesser findings reported earlier provide some insight into the nature and causes of hospital inflation. Although a rigorous test of the determinants of hospital inflation is beyond the scope of this study, a review of these findings to determine which are consistent or inconsistent with alternative theories of inflation is suggestive.

### **Demand theories of inflation**

Demand theories of inflation are based upon changes on the demand side of the hospital market such as increases in insurance coverage and rising income. Since this paper has concentrated on the components of hospital inflation, it is impossible to make any definitive statements about the validity of these hypotheses. A simultaneous equation model, depicting the interrelationship of demand and supply factors, is necessary for separating and delineating the causal influences.

The information on components of hospital inflation, however, does provide evidence relevant to some facets of these theories. For example, it should be noted that trends in hospital inflation are common to all types of hospitals. This would argue in favor of a theory such as one of the demand-pull theories which affects all hospitals, over those theories which emphasize the inefficiencies of nonprofit hospital operation.

The Feldstein demand-pull model requires modification to be consistent with the observed divergence between hospital prices and costs. The model should at least be modified to include a lagged response of cost increases to increases in hospital prices. The implications of the Feldstein theory for components of hospital costs are not very detailed. To the extent that the impetus for cost increases comes from patients' demands for improved services, one would expect increases in costs of food service, more nursing service, and building investment to make patients' surroundings more luxurious. There is little evidence that hospital cost inflation has taken this form. Instead these types of expenses have risen more slowly than other types of expenses. The slight switch to greater use of larger hospitals, however, may reveal an increasing demand among patients for higher quality care, either actual or perceived.

To the extent that the impetus for cost increases comes from hospital administrators who take advantage of increased opportunities for additional revenues to raise costs, the increase in costs could take any form. Presumably those expenses will be increased which give the hospital administrator utility. The hospital might engage in "philanthropic" wage-setting (paying wages above those necessary to attract the required labor force) if the administrator desires to share revenue increases with workers; cost increases could come from additional staff, if the utility of the administrator is primarily a function of the size of his domain as measured by employees; cost increases could take the form of capital expenditures if the utility of the hospital administrator is largely a function of having the biggest, most modern, well-equipped hospital; cost increases could take the form of more skilled personnel and more capital and materials inputs if the administrator is interested in using additional revenues to improve the quality of care. There is some evidence that each of these types of cost increases has occurred. Wages have increased slightly faster than in other industries, giving some weak support to the "philanthropic" wage hypothesis. Employees on the hospital staff per day of hospital care increased 6 percent from 1962 to 1966 (administrative employees per day of care have increased even more rapidly—19 percent). Capital inputs have also increased substantially over the period, particularly plant equipment assets. Major equipment plant assets per day of care increased five times as fast in nonprofit hospitals as in for-profit hospitals. Factor inputs per day of care have increased at a rate of over 3 percent a year.

The second version of the demand-pull hypothesis differs from the Feldstein model in that prices are set at a somewhat higher monopolistic or oligopolistic level and costs are not equated to prices in the short run. Instead, retained earnings are used to acquire additional capital equipment which results in a rise in future operating costs. The similar trends in nonprofit and for-profit revenues, rates of return, and price-cost margins indicate that nonprofit hospitals may pursue pricing policies similar to those of for-profit hospitals. The level of rates of return in for-profit hospitals, however, does exceed that of nonprofit hospitals even with allowance for the tax-exempt status of nonprofit hospitals. The evidence of the oligopolistic pricing of hospital services, therefore, is mixed.

On the cost side, the predicted changes in operating costs are somewhat narrower than in the Feldstein model. The major increases in costs should come from increases in capital equipment—which will not only increase capital expenses but concomitant personnel and supplies expenses. The evidence that most of the labor expense increases have come in the more technical professions and that plant equipment assets have been the major source of increase in assets (particularly in nonprofit hospitals) all give some support to this version of hospital inflation. The more rapid growth in ancillary service expenses is also to be expected from this theory of inflation.

### **Factor-input theories of inflation**

Examination of the components of hospital inflation reveals that theories of inflation which concentrate on the role of only one factor of production in hospital inflation are too narrow in focus. The labor cost-push theory of inflation, limited strictly to labor expenses and only the wage aspect of those expenses, is particularly inadequate to explain the rapid rises both in nonlabor expenses and in the increasing quantities of labor used in the provision of hospital care.

The labor cost-push theory of inflation encompasses several explanations of rising wages: (1) an increase as the result of unionization or threat of unionization, (2) an increase as the result of an increase in skill levels of hospital personnel, (3) a catching-up of hospital wages with those of comparable occupations, (4) "philanthropic" wage-setting as hospitals acquire additional revenues, and (5) tight labor markets.

Although additional information, particularly on wages of comparable occupations, is required to explore each of these in turn, some relevant evidence is provided by the survey. First, unionization or the threat of unionization is likely to be more important for large than for small hospitals. Yet, wages in large hospitals have not risen more rapidly than in small ones. Second, there is some evidence that the composition of

hospital personnel has shifted to include a greater proportion of the high-skill occupations. However, even if the composition of the labor force had remained unchanged, hospital earnings would have increased by 20.0 percent over the period, only slightly less than the actual increase of 20.2 percent. Third, the lowest paid occupations (dietary and household and property employees) had the biggest percentage increases in annual earnings. To the extent that wages in these occupations have been excessively low relative to comparable occupations, some catching-up of hospital wages may be indicated. Fourth, the lower level of wages in for-profit hospitals may indicate that nonprofit hospitals engage in "philanthropic" wage-setting (that is, pay higher wages than are necessary to attract the required labor force). However, in terms of rate of increase, wages have increased much faster in for-profit hospitals than in nonprofit hospitals. Hospital wages have risen more rapidly than wages in other industries, perhaps indicating some "philanthropic" wage-setting. Fifth, there is some evidence that wages have responded to general labor market conditions. Unemployment rates in the economy as a whole were fairly high from 1962 to 1965, with labor markets tightening substantially from 1965 to 1966. Hospital employee earnings exhibited fairly stable increases in the first few years of the period with a substantial acceleration in the last year of the period (annual increases from 1962 to 1966 were 4.4 percent, 3.7 percent, 4.0 percent, and 6.7 percent, chronologically).

Evidence relevant to the wasteful capital expenditures theory of inflation has been mentioned briefly in the review of the demand theories of inflation. Both capital expenses and plant assets (particularly major equipment assets) have increased substantially. Those types of non-capital expenses which could be expected to increase with an increase in capital equipment, such as technical personnel and ancillary service expenses, have also constituted the most rapid increases in costs.

### **Scientific-progress theory of inflation**

This theory of inflation is particularly difficult to examine. Advances in medical technology are hard to catalog and even more difficult to measure. The real test of this theory is whether changes in the way in which hospital care is provided have resulted in any substantial improvements in health. Yet, even if the benefits of scientific progress could be itemized and quantified, the problem of delineating those expenses which increase as a result of advances in technology would still have to be faced. An adequate methodology for accomplishing this feat has yet to be developed.

It is possible, however, to outline several types of expenses which



could reasonably be expected to be more responsive to changes in technology than other types of expenses. It is unlikely that advances in medical technology would result in large increases in such standard costs as dietary, housekeeping, plant engineering, and administrative expenses. Scientific progress is more likely to affect skilled personnel costs, such as more full-time physicians on the hospital staff, and ancillary expenses such as operating room (with more complex surgery), radiology, and laboratory department. Those expenses which are least likely to be affected by advances in technology are in fact those which have experienced the smallest increases in costs. Medical staff expenses, radiology, and laboratory expenses, on the other hand, have increased substantially. Only two categories which might have been expected to increase remained relatively stable—nursing service expenses and operating room expenses.

### Utilization theories of inflation

Several theories of inflation emphasize the role of an increase in utilization of hospital services in total expenditure inflation. Some theories emphasize that the hospital has displaced other medical providers, such as in the case of the hospital emergency and outpatient departments providing care formerly provided by private physicians. Other theories hold that increases in insurance coverage have resulted in "medically-unnecessary" increases in hospitalization. Some theories stress the importance of increases in utilization which force the hospital to operate near capacity levels. Others emphasize shifts in utilization among different size hospitals as representing an important source of inflation.

There is no evidence to indicate that increases in insurance coverage have led to an excessive increase in number of hospital admissions or days of care—increases that have taken place have been quite moderate. This does not rule out a possibly excessive use of ancillary services (too many tests) or an increased demand for more expensive types of hospital care. The rise in ancillary service expenses and the switch in utilization to larger hospitals may both reflect these types of "unnecessary" increases.

The substantial growth in outpatient services does indicate that this role of the hospital has been expanded. Increases in outpatient visits could represent a substitution of hospital care for the care formerly provided by private physicians. It could also represent, of course, an increasing tendency on the part of physicians to overtest.

Utilization of existing capacity increased somewhat but the increases were too moderate to have been an important source of inflationary pressure in the pre-Medicare period. It is possible, though, that this factor may be more important in later time periods.

There was some redistribution of the utilization of services among hospitals of different sizes. In particular, utilization of services in large hospitals increased substantially, while utilization in small hospitals held stable or declined slightly. This redistribution of utilization toward higher cost hospitals, however, had marginal effects on average costs.

### **Summary**

In summary, the demand-pull and scientific-progress theories of inflation are most consistent with the types of hospital cost increases that occurred in the early 1960's. The labor cost-push theory of inflation does not do an adequate job of explaining overall increases in costs in the pre-Medicare period, but may be an important factor in later time periods. Increases in inpatient hospital stays were quite moderate, but outpatient services witnessed a substantial growth, giving some support to the utilization theory of inflation and emphasizing the expanded scope of the hospital.

## TABLES

TABLE 1.—Revenue, expenses, net income, and cash flow, 1962–66

Year	Total revenue	Total expenses	Net income	Cash flow
Total (in millions)				
1962-----	\$6,584	\$6,456	\$127	\$388
1963-----	7,100	6,972	128	419
1964-----	7,890	7,714	176	492
1965-----	8,715	8,538	177	540
1966-----	9,859	9,661	198	625
Percentage increase, 1962–66-----	49.8	49.6	56.1	61.1
Annual average increase, 1962–66-----	10.6	10.6	11.8	12.7
Per patient day				
1962-----	\$35.62	\$34.93	\$0.69	\$2.10
1963-----	37.96	37.28	.68	2.24
1964-----	40.39	39.49	.90	2.52
1965-----	42.77	41.90	.87	2.65
1966-----	46.40	45.47	.93	2.95
Percentage increase, 1962–66-----	30.3	30.2	34.8	40.5
Annual average increase, 1962–66-----	6.8	6.8	7.8	8.9

TABLE 2.—Net income, cash flow, and capital return ratios, 1962–66

Year	Net income ratio		Cash flow <sup>1</sup> ratio		Capital return <sup>2</sup> ratio	
	Total revenue	Plant assets	Total revenue	Plant assets	Total revenue	Plant assets
1962-----	1.93	1.42	5.89	4.33	2.34	1.72
1963-----	1.80	1.33	5.90	4.35	2.23	1.64
1964-----	2.23	1.66	6.24	4.64	2.68	1.99
1965-----	2.03	1.50	6.20	4.58	2.60	1.92
1966-----	2.01	1.52	6.34	4.81	2.65	2.01
Annual average, 1962–66-----	2.00	1.49	6.11	4.54	2.50	1.86

<sup>1</sup> Defined as net income plus depreciation expenses.

<sup>2</sup> Defined as net income plus interest expenses.

TABLE 3.—Revenue, expenses, net income, and cash flow, by type of control, 1962–66

Type of control and year	Total (in millions)				Per patient day			
	Total revenue	Total expenses	Net income	Cash flow	Total revenue	Total expenses	Net income	Cash flow
Nonprofit:								
1962-----	\$4,668	\$4,545	\$123	\$331	\$35.43	\$34.50	\$0.93	\$2.51
1966-----	7,034	6,818	216	550	46.39	44.97	1.42	3.62
Percentage increase, 1962-66-----	50.7	50.0	75.6	66.2	30.9	30.3	52.7	44.2
Annual average in- crease, 1962-66-----	10.8	10.7	15.1	13.5	7.0	6.8	11.2	9.6
For-profit:								
1962-----	\$247	\$225	\$21	\$30	\$29.31	\$26.76	\$2.54	\$3.56
1966-----	431	404	26	47	38.93	36.54	2.39	4.25
Percentage increase, 1962-66-----	74.5	79.6	23.8	56.7	32.8	36.5	-5.6	19.4
Annual average in- crease, 1962-66-----	14.9	15.8	5.5	11.9	7.4	8.1	-1.4	4.5
State and local govern- ment:								
1962-----	\$1,669	\$1,686	-\$18	\$25	\$37.38	\$37.78	-\$0.40	\$0.56
1966-----	2,395	2,439	-44	28	48.10	48.98	-.88	.56
Percentage increase, 1962-66-----	43.5	44.7	-144.4	12.0	28.7	29.6	-120.0	0
Annual average in- crease, 1962-66-----	9.5	9.7	-25.0	2.9	6.5	6.7	-22.0	0

TABLE 4.—Net income, cash flow, and capital return ratios, by type of control, 1962–66

Type of control and year	Net income ratio		Cash flow <sup>1</sup> ratio		Capital return <sup>2</sup> ratio	
	Total revenue	Plant assets	Total revenue	Plant assets	Total revenue	Plant assets
Nonprofit:						
1962-----	2.63	1.91	7.09	5.14	3.09	2.24
1966-----	3.07	2.29	7.81	5.84	3.75	2.80
Annual average, 1962-66-----	2.85	2.08	7.40	5.39	3.37	2.46
For-profit:						
1962-----	8.50	15.21	12.14	21.28	9.53	16.69
1966-----	6.03	10.07	10.90	17.87	8.60	14.11
Annual average, 1962-66-----	5.91	9.39	10.03	15.62	7.62	11.89
State and local government:						
1962-----	-1.08	-.75	1.50	1.07	-.81	-.57
1966-----	-1.84	-1.33	1.17	.84	-1.64	-1.18
Annual average, 1962-66-----	-1.12	-.80	1.65	1.20	-.87	-.62

<sup>1</sup> Defined as net income plus depreciation expenses.<sup>2</sup> Defined as net income plus interest expenses.



TABLE 5.—Revenue, expenses, net income, and cash flow, by bed size of hospital, 1962-66

Bed size and year	Total revenue	Total expenses	Net income	Cash flow	Total revenue	Total expenses	Net income	Cash flow
	Total (in millions)				Per patient day			
6-99 beds:								
1962-----	\$1,086	\$1,037	\$49	\$94	\$31.46	\$30.05	\$1.41	\$2.72
1966-----	1,467	1,402	65	131	39.85	38.09	1.76	3.56
Percentage increase, 1962-66-----	35.1	35.2	32.7	39.4	26.7	26.8	24.8	30.9
Annual average in- crease, 1962-66-----	7.8	7.8	7.3	8.7	6.1	6.1	5.7	7.0
100-199 beds:								
1962-----	\$1,222	\$1,197	\$25	\$83	\$32.97	\$32.29	\$0.68	\$2.23
1966-----	1,794	1,734	59	156	41.39	40.02	1.37	3.61
Percentage increase, 1962-66-----	46.8	44.9	136.0	88.0	25.5	23.9	101.5	61.9
Annual average in- crease, 1962-66-----	10.1	9.7	24.0	17.1	5.8	5.5	19.1	12.8
200-299 beds:								
1962-----	\$1,328	\$1,285	\$43	\$92	\$34.22	\$33.12	\$1.10	\$2.37
1966-----	1,848	1,764	84	158	45.10	43.05	2.05	3.85
Percentage increase, 1962-66-----	39.2	37.3	95.4	71.7	31.8	30.0	86.4	62.5
Annual average in- crease, 1962-66-----	8.6	8.2	18.2	14.5	7.1	6.8	16.8	12.9
300-499 beds:								
1962-----	\$1,468	\$1,447	\$21	\$93	\$37.43	\$36.90	\$0.53	\$2.37
1966-----	2,383	2,342	42	157	48.49	47.64	.85	3.19
Percentage increase, 1962-66-----	62.3	61.9	100.0	68.8	29.6	29.1	60.4	34.6
Annual average in- crease, 1962-66-----	12.9	12.8	19.0	14.0	6.7	6.6	12.5	7.7
500 or more beds:								
1962-----	\$1,479	\$1,490	-\$10	\$26	\$42.02	\$42.32	-\$0.30	\$0.74
1966-----	2,368	2,419	-52	23	56.11	57.33	-1.22	.56
Percentage increase, 1962-66-----	60.1	62.4	-420.0	-13.0	33.5	35.5	-306.7	-24.3
Annual average in- crease, 1962-66-----	12.5	12.9	-51.0	-3.1	7.5	7.9	-42.0	-5.6

TABLE 6.—Net income, cash flow, and capital return ratios, by bed size of hospital, 1962-66

Bed size and year	Net income ratio		Cash flow <sup>1</sup> ratio		Capital return <sup>2</sup> ratio	
	Total revenue	Plant assets	Total revenue	Plant assets	Total revenue	Plant assets
6-99 beds:						
1962-----	4.48	3.44	8.66	6.65	4.88	3.74
1966-----	4.42	3.50	8.93	7.07	5.33	4.22
Annual average, 1962-66----	4.23	3.28	8.50	6.58	5.00	3.87
100-199 beds:						
1962-----	2.06	1.47	6.78	4.83	2.47	1.76
1966-----	3.31	2.53	8.71	6.64	4.36	3.32
Annual average, 1962-66----	2.53	1.85	7.46	5.44	3.19	2.33
200-299 beds:						
1962-----	3.22	2.61	6.93	5.62	3.47	2.81
1966-----	4.55	3.27	8.53	6.13	5.17	3.71
Annual average, 1962-66----	3.84	2.96	7.62	5.88	4.19	3.22
300-499 beds:						
1962-----	1.43	.96	6.33	4.26	2.02	1.36
1966-----	1.75	1.32	6.57	4.97	2.08	1.57
Annual average, 1962-66----	1.90	1.34	6.76	4.77	2.33	1.64
500 or more beds:						
1962-----	-.71	-.52	1.77	1.30	-.30	-.22
1966-----	-2.18	-1.69	.99	.77	-1.69	-1.31
Annual average, 1962-66----	-1.46	-1.10	1.39	1.04	-1.06	-.80

<sup>1</sup> Defined as net income plus depreciation expenses.<sup>2</sup> Defined as net income plus interest expenses.

TABLE 7.—Hospital utilization, 1962-66

Year	Rate per 1,000 population			Mean stay (days)	Occu-pancy rate	Outpatient units per 1,000 population
	Beds	Admis-sions	Patient days			
1962-----	3.57	135	1,013	7.5	77.7	382
1963-----	3.62	135	1,010	7.5	76.4	393
1964-----	3.69	137	1,040	7.6	77.2	409
1965-----	3.76	140	1,070	7.6	78.0	438
1966-----	3.84	142	1,103	7.8	78.7	466
Percentage increase, 1962-66	7.6	5.2	8.9	4.0	-----	22.0
Annual average increase, 1962-66	1.8	1.3	2.1	1.0	-----	5.1

TABLE 8.—Hospital utilization, by type of control, 1962-66

Type of control and year	Rate per 1,000 population			Mean stay (days)	Occu-pancy rate	Outpatient units per 1,000 population
	Beds	Admis-sions	Patient days			
Nonprofit:						
1962-----	2.50	96	722	7.5	79.1	239
1966-----	2.68	100	787	7.9	80.5	294
Percentage increase, 1962-66	7.2	4.2	9.0	5.3	-----	23.0
Annual average increase, 1962-66	1.7	1.0	2.2	1.3	-----	5.3
For-profit:						
1962-----	.18	6	46	7.1	68.5	7
1966-----	.22	8	57	7.1	73.0	12
Percentage increase, 1962-66	22.2	33.3	23.9	0	-----	53.5
Annual average increase, 1962-66	5.1	7.5	5.5	0	-----	11.3
State and local government:						
1962-----	.89	32	245	7.6	75.4	136
1966-----	.95	34	259	7.6	74.8	161
Percentage increase, 1962-66	6.7	6.3	5.7	0	-----	18.1
Annual average increase, 1962-66	1.6	1.5	1.4	0	-----	4.2

TABLE 9.—Hospital utilization, by bed size of hospital, 1962-66

Bed size and year	Rate per 1,000 population			Mean stay (days)	Occu- pancy rate	Outpatient units per 1,000 population
	Beds	Admis- sions	Patient days			
6-99 beds:						
1962-----	.79	31	189	6.0	66.0	51
1966-----	.78	31	191	6.2	66.8	45
Percentage increase, 1962-66-----	-1.3	0	1.1	3.0	-----	-11.8
Annual average increase, 1962-66-----	-.3	0	.3	.8	-----	-2.8
100-199 beds:						
1962-----	.76	30	203	6.8	73.3	59
1966-----	.78	32	225	7.0	78.7	82
Percentage increase, 1962-66-----	2.6	6.7	10.8	4.1	-----	39.0
Annual average increase, 1962-66-----	.6	1.6	2.6	1.0	-----	8.6
200-299 beds:						
1962-----	.68	29	213	7.4	85.5	89
1966-----	.69	28	212	7.5	84.7	95
Percentage increase, 1962-66-----	1.5	-3.4	-.5	.7	-----	6.7
Annual average increase, 1962-66-----	.4	-.8	-.1	.2	-----	1.6
300-499 beds:						
1962-----	.72	26	215	8.4	82.0	67
1966-----	.85	29	255	8.7	82.5	105
Percentage increase, 1962-66-----	18.1	11.5	18.6	3.6	-----	56.8
Annual average increase, 1962-66-----	4.3	2.8	4.4	.9	-----	11.9
500 or more beds:						
1962-----	.63	19	193	10.0	83.9	117
1966-----	.74	22	219	10.0	81.5	139
Percentage increase, 1962-66-----	17.0	15.8	13.5	0	-----	18.7
Annual average increase, 1962-66-----	4.1	3.7	3.2	0	-----	4.4



TABLE 10.—Labor and capital components of hospital operating expenses, 1962-66

Year	Total operating expenses	Payroll expenses	Depreciation, interest, rent	Other operating expenses
Operating expenses (in millions)				
1962-----	\$6,365	\$3,949	\$297	\$2,119
1963-----	6,867	4,261	333	2,273
1964-----	7,604	4,679	369	2,556
1965-----	8,411	5,162	430	2,819
1966-----	9,517	5,797	515	3,205
Percentage increase, 1962-66-----	49.5	46.8	73.4	51.3
Annual average increase, 1962-66-----	10.6	10.1	14.8	10.9
Per patient day				
1962-----	\$34.44	\$21.36	\$1.60	\$11.47
1963-----	36.72	22.79	1.78	12.15
1964-----	38.93	23.96	1.89	13.09
1965-----	41.28	25.34	2.11	13.83
1966-----	44.79	27.28	2.43	15.08
Percentage increase, 1962-66-----	30.1	27.7	51.9	31.5
Annual average increase, 1962-66-----	6.8	6.3	11.0	7.1
Percentages distribution				
1962-----	100.0	62.0	4.6	33.3
1963-----	100.0	62.1	4.8	33.1
1964-----	100.0	61.5	4.9	33.6
1965-----	100.0	61.4	5.1	33.5
1966-----	100.0	60.9	5.4	33.7

TABLE 11.—Labor and capital hospital inputs, 1962-66

Year	Full-time equivalent employees <sup>1</sup>		Annual average earnings <sup>2</sup>	Plant assets	
	Total (in thousands)	Per 100 daily census		Total (in millions)	Per daily census
1962-----	1,243	246	\$3,176	\$8,971	\$17,716
1963-----	1,285	251	3,317	9,627	18,789
1964-----	1,361	254	3,438	10,612	19,831
1965-----	1,443	259	3,577	11,797	21,132
1966-----	1,519	261	3,816	12,985	22,308
Percentage increase, 1962-66---	22.2	6.1	20.2	44.7	25.9
Annual average increase, 1962-66-----	5.1	1.5	4.7	9.7	5.9

<sup>1</sup> Calculated by adding one-half of part-time employees to full-time employees.<sup>2</sup> Calculated by dividing payroll expenses by full-time equivalent employees.

TABLE 12.—Indexes of components of hospital operating expenses per patient day, 1962-66

[1962=100]

Item	1962	1963	1964	1965	1966	Annual average increase
Total operating expenses per patient day-----	100.0	106.6	113.0	119.9	130.1	6.8
Payroll expenses per patient day-----	100.0	106.7	112.2	118.6	127.7	6.3
Annual average salary-----	100.0	104.4	108.2	112.6	120.2	4.7
Labor inputs per patient day-----	100.0	102.0	103.3	105.3	106.1	1.5
Capital expenses per patient day-----	100.0	111.3	118.1	131.9	151.9	11.0
Price of capital inputs-----	100.0	101.6	101.3	102.8	120.1	4.7
Capital inputs per patient day-----	100.0	109.5	116.7	128.3	126.4	6.0
Other expenses per patient day-----	100.0	105.9	114.1	120.6	131.5	7.1
Consumer price index-----	100.0	101.2	102.5	104.3	107.3	1.8
Other inputs per patient day-----	100.0	104.7	111.3	115.6	122.5	5.2
Price of all inputs <sup>1</sup> -----	100.0	103.2	105.9	109.3	115.9	3.8
All inputs per patient day <sup>1</sup> -----	100.0	103.3	106.7	109.9	112.6	3.0

<sup>1</sup> Weights are .615 for payroll expenses, .049 for capital expenses, and .336 for other expenses. The weights are obtained from the proportion of all operating expenses represented by each component in 1964

TABLE 13.—Labor and capital components of hospital operating expenses, by type of control, 1962-66

Type of control and year	Total operating expenses	Payroll expenses	Depreciation, interest, rent	Other operating expenses
Per patient day				
Nonprofit:				
1962-----	\$34.27	\$21.30	\$1.76	\$11.21
1966-----	44.64	27.48	2.61	14.55
Percentage increase, 1962-66-----	30.3	29.0	48.3	29.8
Annual average increase, 1962-66-----	6.8	6.6	10.4	6.7
For-profit:				
1962-----	\$26.00	\$12.38	\$2.02	\$11.60
1966-----	35.29	16.38	3.81	15.09
Percentage increase, 1962-66-----	35.7	32.3	88.6	30.1
Annual average increase, 1962-66-----	7.9	7.2	17.2	6.8
State and local government:				
1962-----	\$36.53	\$23.25	\$1.07	\$12.21
1966-----	47.38	29.12	1.56	16.70
Percentage increase, 1962-66-----	29.7	25.2	45.8	36.8
Annual average increase, 1962-66-----	6.7	5.8	9.9	8.2
Percentage distribution				
Nonprofit:				
1962-----	100.0	62.2	5.1	32.7
1966-----	100.0	61.6	5.8	32.6
For-profit:				
1962-----	100.0	47.6	7.8	44.6
1966-----	100.0	46.4	10.8	42.8
State and local government:				
1962-----	100.0	63.6	2.9	33.4
1966-----	100.0	61.5	3.3	35.2

TABLE 14.—Labor and capital hospital inputs, by type of control, 1962-66

Type of control and year	Full-time equivalent employees <sup>1</sup>		Annual average earnings <sup>2</sup>	Plant assets	
	Total (in thousands)	Per 100 daily census		Total (in millions)	Per daily census
Nonprofit:					
1962-----	871	241	\$3,221	\$6,440	\$17,839
1966-----	1,069	257	3,905	9,413	22,662
Percentage increase, 1962-66	22.7	6.6	21.2	46.2	27.0
Annual average increase, 1962-66-----	5.3	1.6	4.9	10.0	6.2
For-profit:					
1962-----	43	187	\$2,421	\$141	\$6,105
1966-----	61	201	2,978	263	8,667
Percentage increase, 1962-66	41.9	7.5	23.0	86.5	42.0
Annual average increase, 1962-66-----	9.1	1.8	5.3	16.9	9.2
State and local government:					
1962-----	329	269	\$3,156	\$2,390	\$19,542
1966-----	391	287	3,704	3,309	24,261
Percentage increase, 1962-66	18.8	6.7	17.4	38.5	24.1
Annual average increase, 1962-66-----	4.4	1.6	4.1	8.5	5.5

<sup>1</sup> Calculated by adding one-half of part-time employees to full-time employees.<sup>2</sup> Calculated by dividing payroll expenses by full-time equivalent employees.

TABLE 15.—Annual average increase in components of hospital operating expenses per patient day, by type of control, 1962-66

Item	Nonprofit	For-profit	State and local government
Total operating expenses per patient day-----	6.8	7.9	6.7
Payroll expenses per patient day-----	6.6	7.3	5.8
Annual average salary-----	4.9	5.3	4.1
Labor inputs per patient day-----	1.6	1.8	1.6
Capital expenses per patient day-----	10.4	17.2	9.9
Price of capital inputs-----	4.7	4.7	4.7
Capital inputs per patient day-----	5.4	11.9	5.0
Other expenses per patient day-----	6.7	6.8	8.2
Consumer price index-----	1.8	1.8	1.8
Other inputs per patient day-----	4.9	4.9	6.2
Price of all inputs-----	13.9	23.6	33.4
All inputs per patient day-----	12.9	24.1	33.3

<sup>1</sup> Nonprofit weights are .617 for payroll expenses, .053 for capital expenses, and .330 for other expenses.<sup>2</sup> For-profit weights are .449 for payroll expenses, .083 for capital expenses, and .467 for other expenses.<sup>3</sup> State and local government weights are .635 for payroll expenses, .031 for capital expenses, and .334 for other expenses.

TABLE 16.—Labor and capital components of hospital operating expenses, by bed size of hospital, 1962-66

Year	Total operating expenses	Payroll expenses	Depre- ciation, interest, rent	Other operating expenses
Per patient day				
6-99 beds:				
1962.....	\$29.90	\$17.03	\$1.54	\$11.34
1966.....	37.72	20.81	2.54	14.38
Percentage increase, 1962-66.....	26.2	22.2	64.9	26.8
Annual average increase, 1962-66.....	6.0	5.1	13.3	6.1
100-199 beds:				
1962.....	\$31.99	\$19.22	\$1.69	\$11.08
1966.....	39.74	23.53	2.71	13.49
Percentage increase, 1962-66.....	24.2	22.4	60.4	21.8
Annual average increase, 1962-66.....	5.6	5.2	12.5	5.1
200-299 beds:				
1962.....	\$32.53	\$21.11	\$1.47	\$9.94
1966.....	42.78	26.83	2.19	13.76
Percentage increase, 1962-66.....	31.5	27.1	49.0	38.4
Annual average increase, 1962-66.....	7.1	6.2	10.5	8.5
300-499 beds:				
1962.....	\$36.55	\$22.38	\$2.06	\$12.11
1966.....	47.15	28.81	2.52	15.83
Percentage increase, 1962-66.....	29.0	28.7	22.3	30.7
Annual average increase, 1962-66.....	6.6	6.5	5.2	6.9
500 or more beds:				
1962.....	\$41.21	\$27.02	\$1.21	\$12.98
1966.....	55.36	35.46	2.15	17.76
Percentage increase, 1962-66.....	34.3	31.2	77.7	36.8
Annual average increase, 1962-66.....	7.7	7.0	15.5	8.2
Percentage distribution				
6-99 beds:				
1962.....	100.0	57.0	5.2	37.9
1966.....	100.0	55.2	6.7	38.1
100-199 beds:				
1962.....	100.0	60.1	5.3	34.6
1966.....	100.0	59.2	6.8	34.0
200-299 beds:				
1962.....	100.0	64.9	4.5	30.6
1966.....	100.0	62.7	5.1	32.2
300-499 beds:				
1962.....	100.0	61.2	5.6	33.1
1966.....	100.0	61.1	5.3	33.6
500 or more beds:				
1962.....	100.0	65.6	2.9	31.5
1966.....	100.0	64.0	3.9	32.1



TABLE 17.—Labor and capital hospital inputs, by bed size of hospital, 1962-66

Bed size and year	Full-time equivalent employees <sup>1</sup>		Annual average earnings <sup>2</sup>	Plant assets	
	Total (in thousands)	Per 100 daily census		Total (in millions)	Per daily census
6-99 beds:					
1962-----	213	225	\$2,761	\$1,415	\$14,960
1966-----	236	234	3,246	1,852	18,367
Percentage increase, 1962-66	10.8	4.0	17.6	30.9	22.8
Annual average increase, 1962-66	2.6	1.0	4.1	7.0	5.3
100-199 beds:					
1962-----	241	237	\$2,954	\$1,715	\$16,887
1966-----	286	241	3,569	2,354	19,825
Percentage increase, 1962-66	18.7	1.7	20.8	37.3	17.4
Annual average increase, 1962-66	4.4	0.4	4.8	8.2	4.1
200-299 beds:					
1962-----	253	238	\$3,238	\$1,637	\$15,397
1966-----	281	250	3,915	2,573	22,921
Percentage increase, 1962-66	11.1	5.0	20.9	57.2	48.9
Annual average increase, 1962-66	2.7	1.2	4.9	12.0	10.5
300-499 beds:					
1962-----	265	246	\$3,319	\$2,185	\$20,329
1966-----	353	262	4,012	3,153	23,417
Percentage increase, 1962-66	33.2	6.5	20.9	44.3	15.2
Annual average increase, 1962-66	7.4	1.6	4.9	9.6	3.6
500 or more beds:					
1962-----	272	282	\$3,501	\$2,019	\$20,935
1966-----	364	315	4,113	3,053	26,410
Percentage increase, 1962-66	33.8	11.7	17.5	51.2	26.2
Annual average increase, 1962-66	7.6	2.8	4.1	10.9	6.0

<sup>1</sup> Calculated by adding one-half of part-time employees to full-time employees.<sup>2</sup> Calculated by dividing payroll expenses by full-time equivalent employees.

TABLE 18.—Annual average increase in components of hospital operating expenses per patient day, by bed size of hospital, 1962-66

Item	6-99 beds	100-199 beds	200-299 beds	300-499 beds	500 or more beds
Total operating expenses per patient day-----	6.0	5.6	7.1	6.6	7.7
Payroll expenses per patient day-----	5.1	5.2	6.2	6.5	7.0
Annual average salary-----	4.1	4.8	4.9	4.9	4.1
Labor inputs per patient day-----	.8	.4	1.2	1.6	2.8
Capital expenses per patient day-----	13.3	12.5	10.5	5.2	15.5
Price of capital inputs-----	4.7	4.7	4.7	4.7	4.7
Capital inputs per patient day-----	8.2	7.5	5.5	.5	10.3
Other expenses per patient day-----	6.1	5.1	8.5	6.9	8.2
Consumer price index-----	1.8	1.8	1.8	1.8	1.8
Other inputs per patient day-----	4.3	3.2	6.5	5.1	6.3
Price of all inputs-----	13.2	23.8	33.9	43.9	53.4
All inputs per patient day-----	12.6	21.8	33.2	42.7	54.1

<sup>1</sup> Weights are .554 for payroll expenses, .060 for capital expenses, and .386 for other expenses.<sup>2</sup> Weights are .598 for payroll expenses, .055 for capital expenses, and .347 for other expenses.<sup>3</sup> Weights are .623 for payroll expenses, .045 for capital expenses, and .332 for other expenses.<sup>4</sup> Weights are .612 for payroll expenses, .054 for capital expenses, and .334 for other expenses.<sup>5</sup> Weights are .669 for payroll expenses, .032 for capital expenses, and .300 for other expenses.

TABLE 19.—Hospital employees per daily census and annual average earnings for various types of employees, 1962-66

Year	All employees	Administrative	Dietary	Household and property	Professional patient care	Other
Employees per daily census						
1962-----	2.46	0.21	0.26	0.34	1.45	0.19
1963-----	2.51	.22	.27	.34	1.48	.20
1964-----	2.54	.22	.26	.35	1.52	.19
1965-----	2.59	.24	.26	.34	1.56	.19
1966-----	2.61	.25	.26	.34	1.55	.22
Percentage increase, 1962-66---	6.1	19.1	0	0	6.9	15.8
Annual average increase, 1962-66-----	1.5	4.5	0	0	1.7	3.7
Annual average earnings						
1962-----	\$3,176	\$4,077	\$2,373	\$2,735	\$3,418	\$2,213
1963-----	3,317	3,918	2,529	2,891	3,642	2,000
1964-----	3,438	4,097	2,617	2,966	3,746	2,227
1965-----	3,577	4,201	2,774	2,661	3,951	2,491
1966-----	3,816	4,131	2,965	3,384	4,217	2,286
Percentage increase, 1962-66---	20.2	1.3	24.9	23.7	23.4	3.3
Annual average increase, 1962-66-----	4.7	.3	5.7	5.5	5.4	.8

TABLE 20.—Distribution of payroll expenses among types of employees, 1962-66

Year	Total payroll expenses	Administrative	Dietary	Household and property	Professional patient care	Other
Per patient day						
1962-----	\$21.36	\$2.39	\$1.72	\$2.52	\$13.58	\$1.15
1963-----	22.79	2.38	1.84	2.73	14.76	1.07
1964-----	23.96	2.51	1.89	2.81	15.56	1.18
1965-----	25.34	2.72	2.01	2.46	16.84	1.32
1966-----	27.28	2.79	2.10	3.12	17.91	1.37
Percentage increase, 1962-66---	27.7	16.7	22.1	23.8	31.9	19.1
Annual average increase, 1962-66-----	6.3	3.9	5.1	5.5	7.2	4.5
Percentage distribution						
1962-----	100.00	11.2	8.0	11.8	63.6	5.4
1963-----	100.00	10.4	8.1	12.0	64.8	4.7
1964-----	100.00	10.5	7.9	11.7	65.0	4.9
1965-----	100.00	10.7	7.9	9.7	66.5	5.2
1966-----	100.00	10.2	7.7	11.4	65.6	5.0

TABLE 21.—Hospital employees per daily census and annual average earnings for various types of employees, by type of control, 1962–66

Type of control and year	All employees	Administrative	Dietary	Household and property	Professional patient care	Other
Employees per daily census						
Nonprofit:						
1962.....	2.41	0.22	0.27	0.35	1.43	0.15
1966.....	2.57	.24	.26	.35	1.54	.19
Percentage increase, 1962–66.....	6.6	9.1	–3.7	0	7.7	26.7
Annual average increase, 1962–66.....	1.6	2.2	–.9	0	1.9	6.1
For-profit:						
1962.....	1.87	.26	.22	.23	1.08	.08
1966.....	2.01	.30	.21	.23	1.18	.09
Percentage increase, 1962–66.....	7.5	15.4	–4.6	0	9.3	12.5
Annual average increase, 1962–66.....	1.8	3.6	–1.1	0	2.3	3.0
State and local government:						
1962.....	2.69	.19	.27	.32	1.57	.34
1966.....	2.87	.26	.26	.33	1.68	.35
Percentage increase, 1962–66.....	6.7	36.8	–3.7	3.1	7.0	2.9
Annual average increase, 1962–66.....	1.6	8.1	–.9	.8	1.7	.7
Annual average earnings						
Nonprofit:						
1962.....	\$3,221	\$3,554	\$2,382	\$2,727	\$3,490	\$2,789
1966.....	3,905	4,284	2,988	3,396	4,299	2,392
Percentage increase, 1962–66.....	21.2	20.5	25.4	24.5	23.2	–14.2
Annual average increase, 1962–66.....	4.9	4.8	5.8	5.6	5.4	–3.4
For-profit:						
1962.....	2,421	3,309	1,680	1,775	2,565	1,470
1966.....	2,978	3,502	2,191	2,115	3,188	2,549
Percentage increase, 1962–66.....	23.0	5.8	30.4	19.2	24.3	73.4
Annual average increase, 1962–66.....	5.3	1.4	6.9	4.5	5.6	14.8
State and local government:						
1962.....	3,156	6,022	2,458	2,890	3,334	1,510
1966.....	3,704	3,862	3,037	3,537	4,148	2,098
Percentage increase, 1962–66.....	17.4	–35.9	23.6	22.4	24.4	38.9
Annual average increase, 1962–66.....	4.1	–8.0	5.4	5.2	5.6	8.6

TABLE 22.—Distribution of payroll expenses among types of employees, by type of control, 1962-66

Type of control and year	Total payroll expenses	Administrative	Dietary	Household and property	Professional patient care	Other
	Per patient day					
Nonprofit:						
1962-----	\$21.30	\$2.12	\$1.73	\$2.61	\$13.72	\$1.12
1966-----	27.48	2.81	2.14	3.22	18.09	1.22
Percentage increase, 1962-66-----	29.0	32.6	23.7	23.4	31.9	8.9
Annual average increase, 1962-66-----	6.6	7.3	5.5	5.4	7.2	2.2
For-profit:						
1962-----	\$12.38	\$2.35	\$1.03	\$1.10	\$7.59	\$0.31
1966-----	16.38	2.83	1.28	1.30	10.31	.65
Percentage increase, 1962-66-----	32.3	20.4	24.3	18.2	35.8	109.7
Annual average increase, 1962-66-----	7.2	4.8	5.6	4.3	8.0	20.0
State and local government:						
1962-----	\$23.25	\$3.17	\$1.80	\$2.55	\$14.32	\$1.40
1966-----	29.12	2.73	2.17	3.20	19.05	1.98
Percentage increase, 1962-66-----	25.3	-13.9	20.6	25.5	33.0	41.4
Annual average increase, 1962-66-----	5.8	-3.3	4.8	5.8	7.4	9.1
	Percentage distribution					
Nonprofit:						
1962-----	100.0	10.0	8.1	12.2	64.4	5.3
1966-----	100.0	10.2	7.8	11.7	65.8	4.4
For-profit:						
1962-----	100.0	19.0	8.3	8.9	61.3	2.5
1966-----	100.0	17.3	7.8	8.0	62.9	4.0
State and local government:						
1962-----	100.0	13.7	7.8	11.0	61.6	5.9
1966-----	100.0	9.4	7.4	11.0	65.4	6.8



TABLE 23.—Hospital employees per daily census and annual average earnings for various types of employees, by bed size of hospital, 1962-66

Bed size and year	All employees	Administrative	Dietary	Household and property	Professional patient care	Other
Employees per daily census						
6-99 beds:						
1962-----	2.25	0.24	0.26	0.29	1.32	0.14
1966-----	2.34	.26	.27	.28	1.39	.14
Percentage increase, 1962-66-----	4.5	8.3	3.9	-3.4	5.3	0
Annual average increase, 1962-66-----	1.0	2.0	1.0	-.9	1.3	0
100-199 beds:						
1962-----	2.37	.21	.28	.32	1.42	.14
1966-----	2.41	.23	.27	.33	1.45	.12
Percentage increase, 1962-66-----	1.7	9.5	-3.6	3.1	2.1	-14.3
Annual average increase, 1962-66-----	.4	2.3	-.9	.8	.5	-3.4
200-299 beds:						
1962-----	2.38	.19	.26	.34	1.50	.10
1966-----	2.50	.22	.24	.32	1.56	.17
Percentage increase, 1962-66-----	5.1	15.8	-7.7	-5.9	4.0	70.0
Annual average increase, 1962-66-----	1.2	3.7	-1.9	-1.4	1.0	14.2
300-499 beds:						
1962-----	2.46	.22	.26	.38	1.41	.19
1966-----	2.62	.25	.25	.36	1.53	.22
Percentage increase, 1962-66-----	6.5	10.7	-3.8	-5.3	8.5	15.8
Annual average increase, 1962-66-----	1.6	2.6	-1.0	-1.3	2.1	3.7
500 or more beds:						
1962-----	2.82	.21	.26	.35	1.61	.40
1966-----	3.15	.28	.27	.37	1.80	.42
Percentage increase, 1962-66-----	11.7	29.5	3.8	5.7	11.8	5.0
Annual average increase, 1962-66-----	2.8	6.7	1.0	1.4	2.8	1.2
Annual average earnings						
6-99 beds:						
1962-----	\$2,761	\$3,248	\$1,956	\$2,221	\$3,049	\$1,804
1966-----	3,246	3,818	2,366	2,767	3,470	2,603
Percentage increase, 1962-66-----	17.6	17.5	21.0	24.6	13.8	44.3
Annual average increase, 1962-66-----	4.1	4.1	4.9	5.7	3.3	9.6
100-199 beds:						
1962-----	\$2,954	\$3,377	\$2,057	\$2,421	\$3,110	\$3,753
1966-----	3,569	4,065	2,682	2,840	3,924	2,244
Percentage increase, 1962-66-----	20.8	20.4	30.4	17.3	26.2	-38.1
Annual average increase, 1962-66-----	4.8	4.8	6.9	4.1	6.0	-8.4

TABLE 23.—*Continued*

Bed size and year	All employees	Administrative	Dietary	Household and property	Professional patient care	Other
	Annual average earnings					
200-299 beds:						
1962-----	\$3,238	\$3,983	\$2,356	\$2,812	\$3,393	\$3,261
1966-----	3,915	4,278	2,880	3,454	4,254	2,678
Percentage increase, 1962-66-----	20.9	7.4	22.2	22.8	25.4	-17.9
Annual average increase, 1962-66-----	4.9	1.8	5.1	5.3	5.8	-4.2
300-499 beds:						
1962-----	\$3,319	\$3,439	\$2,525	\$2,848	\$3,709	\$2,350
1966-----	4,012	4,095	3,189	3,518	4,432	2,754
Percentage increase, 1962-66-----	20.9	19.1	26.3	23.5	19.5	17.2
Annual average increase, 1962-66-----	4.9	4.5	6.0	5.4	4.6	4.1
500 or more beds:						
1962-----	\$3,501	\$6,548	\$3,001	\$3,242	\$3,745	\$1,421
1966-----	4,113	4,372	3,598	4,071	4,714	1,741
Percentage increase, 1962-66-----	17.5	-33.2	19.9	25.6	25.9	22.5
Annual average increase, 1962-66-----	4.1	-7.4	4.6	5.9	5.9	5.2

TABLE 24.—Distribution of payroll expenses among types of employees, by bed size of hospital, 1962-66

Bed size and year	Total payroll expenses	Administrative	Dietary	Household and property	Professional patient care	Other
Per patient day						
6-99 beds:						
1962-----	\$17.03	\$2.12	\$1.40	\$1.77	\$11.06	\$0.68
1966-----	20.81	2.73	1.72	2.15	13.19	1.02
Percentage increase, 1962-66	22.2	28.8	22.9	21.5	19.3	50.0
Annual average increase, 1962-66-----	5.1	6.5	5.3	5.0	4.5	10.7
100-199 beds:						
1962-----	\$19.22	\$1.96	\$1.57	\$2.13	\$12.14	\$1.41
1966-----	23.53	2.61	1.95	2.56	15.61	.79
Percentage increase, 1962-66	22.4	33.2	24.2	20.2	28.6	-44.0
Annual average increase, 1962-66-----	5.2	7.4	5.6	4.7	6.5	-9.6
200-299 beds:						
1962-----	\$21.11	\$2.04	\$1.66	\$2.63	\$13.88	\$0.90
1966-----	26.83	2.57	1.87	3.05	18.09	1.26
Percentage increase, 1962-66	27.1	26.0	12.7	16.0	30.3	40.0
Annual average increase, 1962-66-----	6.2	6.0	3.0	3.8	6.8	8.8
300-499 beds:						
1962-----	\$22.38	\$2.09	\$1.85	\$2.94	\$14.27	\$1.23
1966-----	28.81	2.75	2.22	3.47	18.68	1.68
Percentage increase, 1962-66	28.7	31.6	20.0	18.0	30.9	36.6
Annual average increase, 1962-66-----	6.5	7.1	4.7	4.2	7.0	8.1
500 or more beds:						
1962-----	\$27.02	\$3.82	\$2.09	\$3.09	\$16.48	\$1.54
1966-----	35.46	3.30	2.65	4.18	23.31	2.01
Percentage increase, 1962-66	31.2	-13.6	26.8	35.3	41.4	30.5
Annual average increase, 1962-66-----	7.0	-3.2	6.1	7.9	9.0	6.9
Percentage distribution						
6-99 beds:						
1962-----	100.0	12.4	8.2	10.4	65.0	4.0
1966-----	100.0	13.1	8.3	10.3	63.4	4.9
100-199 beds:						
1962-----	100.0	10.2	8.2	11.1	63.2	7.3
1966-----	100.0	11.1	8.3	10.9	66.3	3.4
200-299 beds:						
1962-----	100.0	9.7	7.9	12.5	65.8	4.3
1966-----	100.0	9.6	7.0	11.4	67.4	4.7
300-499 beds:						
1962-----	100.0	9.3	8.3	13.2	63.8	5.5
1966-----	100.0	9.5	7.7	12.0	64.9	5.8
500 or more beds:						
1962-----	100.0	14.1	7.7	11.4	61.0	5.7
1966-----	100.0	9.3	7.5	11.8	65.7	5.7

TABLE 25.—Composition of hospital plant assets, 1962-66

Year	Total plant assets	Land and land im- prove- ments	Build- ings	Major equip- ment	Minor equip- ment	Under con- struc- tion	Other
Plant assets (in millions)							
1962-----	\$8,971	\$343	\$5,734	\$1,819	\$37	\$536	\$502
1966-----	12,985	525	7,987	2,972	65	523	912
Percentage increase, 1962-66-----	44.7	53.2	39.3	63.4	75.1	-2.4	81.7
Annual average increase, 1962-66--	9.7	11.3	8.6	13.1	15.0	-.6	16.1
Per daily census							
1962-----	\$17,716	\$677	\$11,324	\$3,591	\$73	\$1,059	\$992
1966-----	22,308	902	13,722	5,106	112	899	1,567
Percentage increase, 1962-66-----	25.9	33.2	21.2	42.2	53.4	-15.1	58.0
Annual average increase, 1962-66--	5.9	7.4	4.9	9.2	11.3	-3.6	12.1
Percentage distribution							
1962-----	100.0	3.8	63.9	20.3	0.4	6.0	5.6
1966-----	100.0	4.0	61.5	22.9	.5	4.0	7.0

TABLE 26.—Composition of hospital beds, 1962-66

Year	Total beds <sup>1</sup>	Obstet- rical	Pediatric	Intensive care	Other <sup>1</sup>
Beds (in thousands)					
1962-----	652	85	62	4	501
1963-----	671	84	64	9	515
1964-----	694	84	66	9	535
1965-----	715	84	68	11	552
1966-----	739	84	69	14	572
Percentage increase, 1962-66-----	13.3	-1.9	12.0	274.1	14.2
Annual average increase, 1962-66-----	3.2	-.5	2.9	39.0	3.4
Percentage distribution					
1962-----	100.0	13.1	9.4	0.9	76.9
1963-----	100.0	12.5	9.5	1.3	76.7
1964-----	100.0	12.1	9.5	1.3	77.1
1965-----	100.0	11.7	9.5	1.5	77.2
1966-----	100.0	11.3	9.3	1.9	77.4

<sup>1</sup> Excludes newborn bassinets.



TABLE 27.—Composition of plant assets, by type of control, 1962-66

Type of control and year	Total plant assets	Land and land im- prove- ments	Build- ings	Major equip- ment	Minor equip- ment	Under con- struc- tion	Other
Per daily census							
Nonprofit:							
1962-----	\$17,839	\$746	\$11,250	\$3,416	\$67	\$1,297	\$1,064
1966-----	22,662	1,020	13,806	5,225	90	1,100	1,420
Percentage increase, 1962-66----	27.0	36.7	22.7	53.0	34.3	-15.2	33.5
Annual average increase, 1962-66-----	6.2	8.1	5.3	11.2	7.7	-3.6	7.5
For-profit:							
1962-----	\$6,105	\$195	\$3,324	\$1,825	\$0	\$95	\$667
1966-----	8,667	400	5,272	2,018	0	249	730
Percentage increase, 1962-66----	42.0	105.1	58.6	10.6	0	162.1	9.4
Annual average increase, 1962-66-----	9.2	19.7	12.2	2.6	0	27.0	2.3
State and local government:							
1962-----	\$19,542	\$564	\$13,050	\$4,442	\$106	\$540	\$839
1966-----	24,261	655	15,341	5,430	202	432	2,201
Percentage increase, 1962-66----	24.1	16.1	17.6	22.2	90.6	20.0	162.3
Annual average increase, 1962-66-----	5.6	3.8	4.1	5.1	17.5	4.7	27.0
Percentage distribution							
Nonprofit:							
1962-----	100.0	4.2	63.1	19.1	0.4	7.3	6.0
1966-----	100.0	4.5	60.9	23.1	.4	4.9	6.3
For-profit:							
1962-----	100.0	3.2	54.4	29.9	0	1.6	10.9
1966-----	100.0	4.2	60.8	23.3	0	2.9	8.4
State and local government:							
1962-----	100.0	2.9	66.8	22.7	.5	2.8	4.3
1966-----	100.0	2.7	63.2	22.4	.8	1.8	9.1

TABLE 28.—Composition of hospital beds, by type of control, 1962-66

Type of control and year	Total beds <sup>1</sup>	Obstet- rical	Pediatric	Intensive care	Other <sup>1</sup>
Beds (in thousands)					
Nonprofit:					
1962-----	456	64	44	2	346
1966-----	515	61	50	9	396
Percentage increase, 1962-66-----	13.0	-4.5	13.6	256.0	14.4
Annual average increase, 1962-66-----	3.1	-1.1	3.2	37.0	3.4
For-profit:					
1962-----	34	3	2	0	29
1966-----	41	4	2	1	35
Percentage increase, 1962-66-----	23.2	22.5	-5.8	-----	22.2
Annual average increase, 1962-66-----	5.4	5.2	-1.4	-----	5.1
State and local government:					
1962-----	162	19	16	1	127
1966-----	182	19	17	5	141
Percentage increase, 1962-66-----	12.5	3.1	10.0	240.5	11.6
Annual average increase, 1962-66-----	3.0	.8	2.4	36.0	2.8
Percentage distribution					
Nonprofit:					
1962-----	100.0	14.0	9.6	0.5	75.9
1966-----	100.0	11.8	9.7	1.7	76.8
For-profit:					
1962-----	100.0	8.9	6.2	.0	84.9
1966-----	100.0	8.8	4.8	2.2	84.2
State and local government:					
1962-----	100.0	11.5	9.6	.9	78.0
1966-----	100.0	10.5	9.4	2.7	77.4

<sup>1</sup> Excludes newborn bassinets.

TABLE 29.—Composition of plant assets, by bed size of hospital, 1962-66

Bed size and year	Total plant assets	Land and land im- prove- ments	Build- ings	Major equip- ment	Minor equip- ment	Under con- struc- tion	Other
Per daily census							
6-99 beds:							
1962-----	\$14,960	\$460	\$9,939	\$3,476	\$53	\$575	\$458
1966-----	18,367	645	11,953	4,621	73	373	701
Percentage increase, 1962-66----	22.8	40.2	20.3	32.9	37.7	-35.1	53.1
Annual average increase, 1962-66-----	5.3	8.8	4.7	7.4	8.3	-7.8	11.2
100-199 beds:							
1962-----	\$16,887	\$510	\$11,992	\$3,159	\$100	\$530	\$597
1966-----	19,826	627	13,513	4,400	128	186	971
Percentage increase, 1962-66----	17.4	22.9	12.7	39.3	28.0	-64.9	62.6
Annual average increase, 1962-66-----	4.1	5.3	3.0	8.6	6.4	-13.3	12.9
200-299 beds:							
1962-----	\$15,397	\$450	\$8,922	\$2,419	\$67	\$2,440	\$1,099
1966-----	22,921	609	12,562	4,631	93	1,891	3,135
Percentage increase, 1962-66----	48.9	35.3	40.8	91.4	38.8	-22.5	185.3
Annual average increase, 1962-66-----	10.5	7.9	8.9	17.6	8.5	-5.2	30.0
300-499 beds:							
1962-----	\$20,329	\$710	\$12,890	\$4,598	\$69	\$953	\$1,109
1966-----	23,417	927	14,581	5,372	101	840	1,595
Percentage increase, 1962-66----	15.2	30.6	13.1	16.8	46.4	-11.9	43.8
Annual average increase, 1962-66-----	3.6	6.9	3.1	4.0	10.0	-2.9	9.5
500 or more beds:							
1962-----	\$20,935	\$1,280	\$12,880	\$4,328	\$77	\$688	\$1,682
1966-----	26,410	1,666	15,603	6,405	158	1,195	1,382
Percentage increase, 1962-66----	26.2	30.2	21.1	48.0	105.2	73.7	17.8
Annual average increase, 1962-66-----	6.0	6.8	4.9	10.3	19.7	14.8	4.2
Percentage distribution							
6-99 beds:							
1962-----	100.0	3.1	66.4	23.2	0.4	3.8	3.1
1966-----	100.0	3.5	65.1	25.2	.4	2.0	3.8
100-199 beds:							
1962-----	100.0	3.0	71.0	18.7	.6	3.1	3.5
1966-----	100.0	3.2	68.2	22.2	.6	.9	4.9
200-299 beds:							
1962-----	100.0	2.9	57.9	15.7	.4	15.8	7.1
1966-----	100.0	2.7	54.8	20.2	.4	8.3	13.7
300-499 beds:							
1962-----	100.0	3.5	63.4	22.6	.3	4.7	5.5
1966-----	100.0	4.0	62.3	22.9	.4	3.6	6.8
500 or more beds:							
1962-----	100.0	6.1	61.5	20.7	.4	3.3	8.0
1966-----	100.0	6.3	59.1	24.3	.6	4.5	5.2

TABLE 30.—Composition of hospital beds, by bed size of hospital, 1962–66

Bed size and year	Total beds <sup>1</sup>	Obstet- rical	Pediatric	Intensive care	Other <sup>1</sup>
(In thousands)					
6-99 beds:					
1962.....	143	23	7	0	113
1966.....	151	21	8	2	121
Percentage increase, 1962-66.....	5.4	-9.3	4.8	-----	6.7
Annual average increase, 1962-66.....	1.3	-2.2	1.2	-----	1.6
100-199 beds:					
1962.....	138	19	15	1	104
1966.....	151	19	17	1	113
Percentage increase, 1962-66.....	9.0	3.2	10.9	155.3	8.9
Annual average increase, 1962-66.....	2.2	.8	2.6	26.0	2.2
200-299 beds:					
1962.....	124	18	14	1	91
1966.....	133	16	15	2	99
Percentage increase, 1962-66.....	6.6	-9.6	4.4	372.9	8.1
Annual average increase, 1962-66.....	1.6	-2.3	1.1	47.0	2.0
300-499 beds:					
1962.....	131	16	13	1	101
1966.....	163	15	15	5	128
Percentage increase, 1962-66.....	24.4	-2.1	11.8	534.2	26.2
Annual average increase, 1962-66.....	5.6	- .5	2.8	60.0	6.0
500 or more beds:					
1962.....	115	10	11	2	91
1966.....	142	12	15	3	112
Percentage increase, 1962-66.....	23.4	19.0	28.2	86.0	22.1
Annual average increase, 1962-66.....	5.4	4.4	6.4	16.8	5.1
Percentage distribution					
6-99 beds:					
1962.....	100.0	15.8	5.1	0.1	78.9
1966.....	100.0	13.6	5.1	1.3	79.9
100-199 beds:					
1962.....	100.0	13.4	11.1	.4	75.1
1966.....	100.0	12.7	11.3	1.0	75.0
200-299 beds:					
1962.....	100.0	14.5	11.5	.4	73.5
1966.....	100.0	12.3	11.3	1.8	74.6
300-499 beds:					
1962.....	100.0	12.0	10.0	.6	77.4
1966.....	100.0	9.4	9.0	3.1	78.5
500 or more beds:					
1962.....	100.0	9.0	9.9	1.6	79.5
1966.....	100.0	8.7	10.3	2.4	78.6

<sup>1</sup> Excludes newborn bassinets.



TABLE 31.—Departmental operating expenses, 1962-66

Year	Total operating expenses	Administrative	Dietary and house-keeping	Plant engineering	Nursing service	Medical service	Pharmacy	Operating and delivery room	Radiology	Laboratory	Out-patient department	Depreciation, interest, rent	Other
Operating expenses (in millions)													
1962-----	\$6,365	\$725	\$1,136	\$431	\$1,527	\$310	\$274	\$441	\$305	\$367	\$146	\$297	\$408
1963-----	6,867	772	1,202	460	1,656	339	293	477	333	416	160	333	426
1964-----	7,604	859	1,263	502	1,821	380	318	520	387	461	187	369	506
1965-----	8,411	962	1,390	549	2,013	408	340	577	434	522	224	430	564
1966-----	9,517	1,110	1,531	610	2,221	464	387	651	503	603	260	515	661
Percentage increase, 1962-66-----	49.5	53.1	34.8	41.5	45.4	49.7	41.2	47.6	64.9	64.3	78.1	73.4	62.0
Annual average increase, 1962-66-----	10.6	11.2	7.8	9.1	9.8	10.6	9.0	10.2	13.3	13.2	15.5	14.8	12.8
Per patient day													
1962-----	\$34.44	\$3.92	\$6.15	\$2.33	\$8.26	\$1.68	\$1.48	\$2.39	\$1.65	\$1.99	\$0.79	\$1.60	\$2.21
1963-----	36.72	4.13	6.43	2.46	8.85	1.81	1.57	2.55	1.78	2.22	.85	1.78	2.28
1964-----	38.93	4.40	6.62	2.57	9.32	1.95	1.63	2.66	1.98	2.36	.96	1.89	2.59
1965-----	41.28	4.72	6.82	2.69	9.88	2.00	1.67	2.83	2.13	2.56	1.10	2.11	2.77
1966-----	44.79	5.22	7.21	2.87	10.45	2.18	1.82	3.06	2.37	2.84	1.22	2.42	3.11
Percentage increase, 1962-66-----	30.1	33.2	17.2	23.2	26.5	29.8	23.0	28.0	43.6	42.7	54.4	51.2	40.7
Annual average increase, 1962-66-----	6.8	7.4	4.0	5.4	6.1	6.7	5.3	6.4	9.5	9.3	11.5	10.7	8.9
Percentage distribution													
1962-----	100.0	11.4	17.8	6.8	24.0	4.9	4.3	6.9	4.8	5.8	2.3	4.7	6.4
1963-----	100.0	11.2	17.5	6.7	24.1	4.9	4.3	6.9	4.8	6.1	2.3	4.8	6.2
1964-----	100.0	11.3	17.0	6.6	23.9	5.0	4.2	6.8	5.1	6.1	2.5	4.9	6.7
1965-----	100.0	11.4	16.5	6.5	23.9	4.9	4.0	6.9	5.2	6.2	2.7	5.1	6.7
1966-----	100.0	11.7	16.1	6.4	23.3	4.9	4.1	6.8	5.3	6.3	2.7	5.4	6.9

TABLE 32.—Departmental operating expenses, by type of control, 1962-66

Type of control and year	Total operating expenses	Administrative	Dietary and house-keeping	Plant engineering	Nursing service	Medical service	Pharmacy	Operating and delivery room	Radiology	Laboratory	Out-patient department	Depreciation, interest, rent	Other
Per patient day													
Nonprofit:													
1962-----	\$34.27	\$3.85	\$6.15	\$2.30	\$8.22	\$1.51	\$1.41	\$2.54	\$1.72	\$1.99	\$0.70	\$1.76	\$2.11
1966-----	44.64	5.16	7.22	2.85	10.39	2.13	1.73	3.12	2.39	2.86	1.08	2.61	3.09
Percentage increase, 1962-66-----	30.3	34.0	17.4	23.9	26.4	41.1	22.7	23.3	39.0	43.7	54.3	49.3	46.4
Annual average increase, 1962-66-----	6.8	7.6	4.1	5.5	6.0	9.0	5.3	5.4	8.6	9.5	11.5	10.4	10.0
For-profit:													
1962-----	\$26.00	\$3.22	\$4.35	\$1.46	\$4.44	\$1.78	\$2.17	\$1.44	\$1.22	\$1.28	\$0.05	\$2.02	\$2.55
1966-----	35.29	5.41	5.42	1.85	6.27	1.99	2.68	3.01	2.01	1.99	.10	3.81	.73
Percentage increase, 1962-66-----	35.7	68.0	24.6	26.7	41.2	11.8	23.5	109.0	64.8	55.5	100.0	88.6	-71.4
Annual average increase, 1962-66-----	7.9	13.8	5.7	6.8	9.0	2.8	5.4	20.0	13.3	11.7	19.0	17.2	-14.5
State and local government:													
1962-----	\$36.53	\$4.28	\$6.47	\$2.59	\$9.09	\$2.16	\$1.55	\$2.12	\$1.53	\$2.11	\$1.18	\$1.07	\$2.40
1966-----	47.38	5.38	7.55	3.16	11.59	2.39	1.90	2.89	2.37	2.98	1.91	1.56	3.71
Percentage increase, 1962-66-----	29.7	25.7	16.7	22.0	27.5	10.6	22.6	36.3	54.9	41.2	61.9	45.8	54.6
Annual average increase, 1962-66-----	6.7	5.9	3.9	5.1	6.3	2.6	5.2	8.1	11.5	9.0	12.8	9.9	11.5
Percentage distribution													
Nonprofit:													
1962-----	100.0	11.2	17.9	6.7	24.0	4.4	4.1	7.4	5.0	5.8	2.0	5.1	6.2
1966-----	100.0	11.6	16.2	6.4	23.3	4.8	3.9	7.0	5.4	6.4	2.4	5.8	6.9
For-profit:													
1962-----	100.0	12.3	16.7	5.6	17.1	6.8	8.3	5.5	4.7	4.9	.2	7.8	9.8
1966-----	100.0	15.3	15.4	5.2	17.8	5.6	7.6	8.5	5.7	5.6	.3	10.8	2.1
State and local government:													
1962-----	100.0	11.7	17.7	7.1	24.9	5.9	4.2	5.8	4.2	5.8	3.2	2.9	6.6
1966-----	100.0	11.4	15.9	6.7	24.5	5.0	4.0	6.1	5.0	6.3	4.0	3.3	7.8

TABLE 33.—Departmental operating expenses, by bed size of hospital, 1962-66

Bed size and year	Per patient day												Other
	Total operating expenses	Administrative	Dietary and house-keeping	Plant engineering	Nursing service	Medical service	Pharmacy	Operating and delivery room	Radiology	Laboratory	Out-patient department	Depreciation, interest, rent	
6-99 beds:													
1962-----	\$29.90	\$3.82	\$5.21	\$1.80	\$7.11	\$1.27	\$1.66	\$2.33	\$1.55	\$1.54	\$0.32	\$1.54	\$1.76
1966-----	37.72	5.13	6.12	2.27	9.06	1.50	2.11	2.85	2.29	2.16	.30	2.54	1.40
Percentage increase, 1962-66-----	26.2	34.3	17.5	26.1	27.4	18.1	27.1	22.3	47.7	40.3	-6.2	64.9	-20.5
Annual average increase, 1962-66-----	6.0	7.7	4.1	6.0	6.3	4.3	6.2	5.2	10.2	8.8	-1.5	13.3	-4.8
100-199 beds:													
1962-----	\$31.99	\$3.69	\$5.68	\$2.07	\$8.09	\$1.43	\$1.58	\$2.55	\$1.67	\$1.93	\$0.35	\$1.69	\$1.26
1966-----	39.74	4.86	6.48	2.49	9.66	1.57	1.78	2.98	2.20	2.49	.62	2.71	1.89
Percentage increase, 1962-66-----	24.2	31.7	14.1	20.3	19.4	9.8	12.7	16.9	31.7	29.0	77.1	60.4	50.0
Annual average increase, 1962-66-----	5.6	7.1	3.4	4.7	4.5	2.4	3.0	4.0	7.1	6.6	15.4	12.6	10.7
200-299 beds:													
1962-----	\$32.53	\$3.67	\$5.95	\$2.15	\$8.07	\$1.28	\$1.31	\$2.31	\$1.75	\$2.01	\$0.52	\$1.47	\$2.02
1966-----	42.78	4.99	6.92	2.62	10.60	1.80	1.64	3.14	2.45	2.95	.87	2.19	2.60
Percentage increase, 1962-66-----	31.5	36.0	16.3	21.9	31.4	40.6	25.2	35.9	40.0	46.8	67.3	49.0	28.7
Annual average increase, 1962-66-----	7.1	8.0	3.9	5.1	7.0	8.8	5.8	8.0	8.7	10.1	14.1	10.6	6.8
300-499 beds:													
1962-----	\$36.55	\$3.82	\$6.74	\$2.72	\$8.66	\$1.72	\$1.48	\$2.43	\$1.69	\$2.27	\$0.70	\$2.06	\$2.26
1966-----	47.15	5.07	7.61	3.27	10.92	2.54	1.74	3.18	2.32	3.22	1.06	2.52	3.71
Percentage increase, 1962-66-----	29.0	32.7	12.9	20.2	26.1	47.7	17.6	30.9	37.3	41.9	51.4	22.3	64.2
Annual average increase, 1962-66-----	6.6	7.3	3.1	4.7	6.0	10.2	4.2	7.0	8.3	9.2	10.9	5.2	13.2
500 or more beds:													
1962-----	\$41.21	\$4.67	\$7.10	\$2.89	\$9.34	\$2.75	\$1.39	\$2.30	\$1.58	\$2.14	\$2.09	\$1.21	\$3.76
1966-----	55.36	6.10	8.70	3.57	11.81	3.36	1.89	3.12	2.59	3.25	3.17	2.15	5.65

TABLE 33.—Departmental operating expenses, by bed size of hospital, 1962-66—Continued

Bed size and year	Per patient day												
	Total operating expenses	Administrative	Dietary and house-keeping	Plant engineering	Nursing service	Medical service	Pharmacy	Operating and delivery room	Radiology	Laboratory	Out-patient department	Depreciation, interest, rent	Other
Percentage increase, 1962-66----- Annual average increase, 1962-66-----	34.3	30.6	22.5	23.5	26.4	22.2	36.0	35.7	63.9	51.9	51.7	77.7	50.3
	7.7	6.9	5.2	5.4	6.1	5.2	8.0	7.9	13.1	11.0	11.0	15.5	
Percentage distribution													
6-99 beds: 1962----- 1966-----	100.0	12.8	17.4	6.0	23.8	4.2	5.6	7.8	5.2	5.2	1.1	5.2	5.9
	100.0	13.6	16.2	6.0	24.0	4.0	5.6	7.6	6.1	5.7	.8	6.7	4.0
100-199 beds: 1962----- 1966-----	100.0	11.5	17.8	6.5	25.3	4.5	4.9	8.0	5.2	6.0	1.1	5.3	3.9
	100.0	12.2	16.3	6.3	24.3	4.0	4.5	7.5	5.5	6.3	1.6	6.8	4.8
200-299 beds: 1962----- 1966-----	100.0	11.3	18.3	6.6	24.8	3.9	4.0	7.1	5.4	6.2	1.6	4.5	6.2
	100.0	11.7	16.2	6.1	24.8	4.2	3.8	7.4	5.7	6.9	2.0	5.1	6.1
300-499 beds: 1962----- 1966-----	100.0	10.5	18.4	7.4	23.7	4.7	4.0	6.6	4.6	6.2	1.9	5.6	6.2
	100.0	10.8	16.1	6.9	23.2	5.4	3.7	6.7	4.9	6.8	2.2	5.3	7.9
500 or more beds: 1962----- 1966-----	100.0	11.3	17.2	7.0	22.7	6.7	3.4	5.6	3.8	5.2	5.1	2.9	9.1
	100.0	11.0	15.7	6.4	21.3	6.1	3.4	5.6	4.7	5.9	5.7	3.9	10.2



TABLE 34.—Source of hospital revenue, 1962-66

Year	Total revenue	Net patient revenue	Contributions	Other revenue
Revenue (in millions)				
1962.....	\$6,584	\$5,768	\$155	\$661
1963.....	7,100	6,260	173	667
1964.....	7,890	6,965	197	728
1965.....	8,715	7,714	206	794
1966.....	9,859	8,757	232	870
Percentage increase, 1962-66.....	49.7	51.8	49.7	31.6
Annual average increase, 1962-66.....	10.6	11.0	10.6	7.1
Per patient day				
1962.....	\$35.62	\$31.20	\$0.84	\$3.58
1963.....	37.96	33.47	.92	3.57
1964.....	40.39	35.66	1.01	3.72
1965.....	42.77	37.86	1.01	3.90
1966.....	46.40	41.22	1.09	4.10
Percentage increase, 1962-66.....	30.3	32.1	29.8	14.5
Annual average increase, 1962-66.....	6.8	7.2	6.7	3.4
Percentage distribution				
1962.....	100.0	87.6	2.4	10.0
1963.....	100.0	88.2	2.4	9.4
1964.....	100.0	88.3	2.5	9.2
1965.....	100.0	88.5	2.4	9.1
1966.....	100.0	88.8	2.3	8.8

TABLE 35.—Departmental patient revenue per patient day, 1962-66

Year	Gross patient revenue	Room and board	Operating room	Radiology	Laboratory	Pharmacy	Other inpatient revenue	Out-patient revenue
Per patient day								
1962.....	\$34.99	\$16.50	\$3.26	\$2.26	\$3.37	\$3.14	\$3.67	\$2.80
1963.....	37.50	17.74	3.42	2.47	3.66	3.21	4.10	2.91
1964.....	39.97	19.04	3.50	2.64	3.89	3.31	4.43	3.16
1965.....	42.40	19.89	3.68	2.79	4.29	3.41	4.93	3.42
1966.....	46.13	21.40	3.93	3.03	4.63	3.69	5.51	3.94
Percentage increase, 1962-66.....	31.8	29.7	20.6	34.1	37.4	17.5	50.1	40.7
Annual average increase, 1962-66.....	7.1	6.7	4.8	7.6	8.3	4.1	10.7	8.9
Percentage distribution								
1962.....	100.0	47.2	9.3	6.5	9.6	9.0	10.5	8.0
1963.....	100.0	47.3	9.1	6.6	9.8	8.6	10.9	7.8
1964.....	100.0	47.6	8.8	6.6	9.7	8.3	11.1	7.9
1965.....	100.0	46.9	8.7	6.6	10.1	8.0	11.6	8.1
1966.....	100.0	46.4	8.5	6.6	10.0	8.0	11.9	8.5

TABLE 36.—Source of hospital revenue, by type of control, 1962-66

Type of control and year	Total revenue	Net patient revenue	Contributions	Other revenue
Per patient day				
Nonprofit:				
1962-----	\$35.43	\$32.96	\$0.79	\$1.68
1966-----	46.39	43.25	.82	2.33
Percentage increase, 1962-66-----	30.9	31.2	3.8	38.7
Annual average increase, 1962-66-----	7.0	7.0	.9	8.5
For-profit:				
1962-----	\$29.31	\$27.40	\$0.00	\$1.91
1966-----	38.93	37.07	.00	\$1.86
Percentage increase, 1962-66-----	32.8	35.3	0	-2.6
Annual average increase, 1962-66-----	7.4	7.9	0	-.6
State and local government:				
1962-----	\$37.38	\$26.75	\$1.15	\$9.48
1966-----	48.10	35.95	2.18	9.97
Percentage increase, 1962-66-----	28.7	34.4	89.6	5.2
Annual average increase, 1962-66-----	6.5	7.7	17.3	1.3
Percentage distribution				
Nonprofit:				
1962-----	100.0	93.0	2.2	4.8
1966-----	100.0	93.2	1.8	5.0
For-profit:				
1962-----	100.0	93.5	0	6.5
1966-----	100.0	95.2	0	4.8
State and local government:				
1962-----	100.0	71.6	3.1	25.4
1966-----	100.0	74.7	4.5	20.7

TABLE 37.—Departmental patient revenue per patient day, by type of control, 1962-66

Type of control and year	Gross patient revenue	Room and board	Operating room	Radiology	Laboratory	Pharmacy	Other inpatient revenue	Out-patient revenue
Per patient day								
Nonprofit:								
1962-----	\$36.27	\$17.57	\$3.49	\$2.41	\$3.52	\$3.09	\$3.68	\$2.51
1966-----	47.88	22.79	4.26	3.19	4.90	3.67	5.29	3.78
Percentage increase, 1962-66--	32.0	29.7	22.1	32.4	39.2	18.8	43.8	50.6
Annual average increase, 1962-66-----	7.2	6.7	5.1	7.3	8.6	4.4	9.5	10.8
For-profit:								
1962-----	\$30.18	\$15.18	\$2.60	\$2.15	\$2.47	\$5.13	\$1.97	\$0.69
1966-----	39.17	17.23	2.98	2.61	3.18	5.06	5.97	2.15
Percentage increase, 1962-66--	29.8	13.5	14.6	21.4	28.7	-1.4	203.0	211.6
Annual average increase, 1962-66-----	6.7	3.2	3.5	5.0	6.5	- .3	32.0	33.0
State and local government:								
1962-----	\$32.13	\$13.58	\$2.70	\$1.85	\$3.08	\$2.89	\$3.95	\$4.09
1966-----	42.35	18.09	3.16	2.63	4.15	3.44	6.06	4.83
Percentage increase, 1962-66--	31.8	33.2	17.0	42.2	34.7	19.0	53.2	18.1
Annual average increase, 1962-66-----	7.1	7.4	4.0	9.2	7.7	4.4	11.2	4.2
Percentage distribution								
Nonprofit:								
1962-----	100.0	48.4	9.6	6.6	9.7	8.5	10.1	6.9
1966-----	100.0	47.6	8.9	6.7	10.2	7.7	11.0	7.9
For-profit:								
1962-----	100.0	50.3	8.6	7.1	8.2	17.0	6.5	2.3
1966-----	100.0	44.0	7.6	6.7	8.1	12.9	15.2	5.5
State and local government:								
1962-----	100.0	42.3	8.4	5.8	9.6	9.0	12.3	12.7
1966-----	100.0	42.7	7.5	6.2	9.8	8.1	14.3	11.4

TABLE 38.—Source of hospital revenue, by bed size of hospital, 1962-66

Bed size and year	Total revenue	Net patient revenue	Contri- butions	Other revenue
Per patient day				
6-99 beds:				
1962.....	\$31.46	\$29.55	\$0.64	\$1.27
1966.....	39.85	38.15	.35	1.35
Percentage increase, 1962-66.....	26.7	29.1	-45.3	6.3
Annual average increase, 1962-66.....	6.1	6.6	-9.8	1.5
100-199 beds:				
1962.....	\$32.97	\$30.59	\$1.08	\$1.29
1966.....	41.39	38.68	1.18	1.54
Percentage increase, 1962-66.....	25.5	26.4	9.3	19.4
Annual average increase, 1962-66.....	5.8	6.0	2.2	4.5
200-299 beds:				
1962.....	\$34.22	\$30.80	\$0.29	\$3.12
1966.....	45.10	41.50	.27	3.33
Percentage increase, 1962-66.....	31.8	34.7	-6.9	6.7
Annual average increase, 1962-66.....	7.2	7.7	-1.7	1.6
300-499 beds:				
1962.....	\$37.43	\$34.61	\$0.76	\$2.06
1966.....	48.49	44.36	.84	3.29
Percentage increase, 1962-66.....	29.5	28.2	10.5	59.7
Annual average increase, 1962-66.....	6.7	6.4	2.5	12.4
500 or more beds:				
1962.....	\$42.02	\$30.12	\$1.47	\$10.43
1966.....	56.11	42.56	2.76	10.80
Percentage increase, 1962-66.....	33.5	41.3	87.8	3.5
Annual average increase, 1962-66.....	7.5	9.0	17.1	.9
Percentage distribution				
6-99 beds:				
1962.....	100.0	93.9	2.0	4.0
1966.....	100.0	95.7	.9	3.4
100-199 beds:				
1962.....	100.0	92.8	3.3	3.9
1966.....	100.0	93.4	2.8	3.7
200-299 beds:				
1962.....	100.0	90.0	.8	9.1
1966.....	100.0	92.0	.6	7.4
300-499 beds:				
1962.....	100.0	92.5	2.0	5.5
1966.....	100.0	91.5	1.7	6.8
500 or more beds:				
1962.....	100.0	71.7	3.5	24.8
1966.....	100.0	75.8	4.9	19.2



TABLE 39.—Departmental patient revenue per patient day, by bed size of hospital, 1962-66

Bed size and year	Gross patient revenue	Room and board	Operating room	Radiology	Laboratory	Pharmacy	Other inpatient revenue	Out-patient revenue
Per patient day								
6-99 beds:								
1962-----	\$31.68	\$14.71	\$3.22	\$2.17	\$2.78	\$4.13	\$2.77	\$1.89
1966-----	40.65	18.38	3.74	2.98	3.80	4.71	4.66	2.37
Percentage increase, 1962-66--	28.3	24.9	16.1	37.3	36.7	14.0	68.2	25.4
Annual average increase, 1962-66-----	6.4	5.7	3.8	8.2	8.1	3.3	13.9	5.8
100-199 beds:								
1962-----	\$33.21	\$16.94	\$3.30	\$2.30	\$3.11	\$3.32	\$2.45	\$1.79
1966-----	41.87	20.91	3.80	2.80	3.93	3.76	3.56	3.12
Percentage increase, 1962-66--	26.1	23.4	15.2	21.7	26.4	13.3	45.3	74.3
Annual average increase, 1962-66-----	6.0	5.4	3.6	5.0	6.0	3.2	9.8	14.9
200-299 beds:								
1962-----	\$33.02	\$16.03	\$3.33	\$2.36	\$3.41	\$3.08	\$2.89	\$1.92
1966-----	44.48	21.34	4.16	3.29	4.57	3.78	4.56	2.78
Percentage increase, 1962-66--	34.7	33.1	24.9	39.4	34.0	22.7	57.8	44.8
Annual average increase, 1962-66-----	7.7	7.4	5.7	8.7	7.6	5.2	12.1	9.7
300-499 beds:								
1962-----	\$39.58	\$18.49	\$3.40	\$2.44	\$3.89	\$2.95	\$4.86	\$3.54
1966-----	50.49	23.24	4.14	3.10	5.16	3.42	6.38	5.04
Percentage increase, 1962-66--	27.6	25.7	21.8	27.0	32.6	15.9	31.3	42.4
Annual average increase, 1962-66-----	6.3	5.9	5.1	6.2	7.3	3.8	7.1	9.2
500 or more beds:								
1962-----	\$37.19	\$16.07	\$3.01	\$2.01	\$3.59	\$2.24	\$5.35	\$4.92
1966-----	51.80	22.46	3.78	2.98	5.52	2.93	8.15	5.98
Percentage increase, 1962-66--	39.3	39.8	25.6	48.3	53.8	30.8	52.3	21.5
Annual average increase, 1962-66-----	8.6	8.7	5.9	10.4	11.4	6.9	11.1	5.0
Percentage distribution								
6-99 beds:								
1962-----	100.0	46.4	10.2	6.8	8.8	13.0	8.7	6.0
1966-----	100.0	45.2	9.2	7.3	9.3	11.6	11.5	5.8
100-199 beds:								
1962-----	100.0	51.0	9.9	6.9	9.4	10.0	7.4	5.4
1966-----	100.0	49.9	9.1	6.7	9.4	9.0	8.5	7.5
200-299 beds:								
1962-----	100.0	48.5	10.1	7.1	10.3	9.3	8.8	5.8
1966-----	100.0	48.0	9.4	7.4	10.3	8.5	10.3	6.3
300-499 beds:								
1962-----	100.0	46.7	8.6	6.2	9.8	7.5	12.3	8.9
1966-----	100.0	46.0	8.2	6.1	10.2	6.8	12.6	10.0
500 or more beds:								
1962-----	100.0	43.2	8.1	5.4	9.7	6.0	14.4	13.2
1966-----	100.0	43.4	7.3	5.8	10.7	5.7	15.7	11.5

TABLE 40.—Ratio of patient revenue to direct costs of various ancillary services, 1962-66

Year	Operating room	Delivery room	Anesthesiology	Radiology	Laboratory	Physical therapy	Pharmacy
1962-----	1.43	0.97	1.62	1.37	1.70	1.27	2.12
1963-----	1.43	.91	1.57	1.39	1.64	1.24	2.05
1964-----	1.40	.88	1.53	1.33	1.65	1.29	2.04
1965-----	1.37	.86	1.52	1.31	1.68	1.23	2.04
1966-----	1.37	.81	1.50	1.28	1.63	1.28	2.02
Annual average, 1962-66-----	1.40	.89	1.55	1.34	1.66	1.26	2.05

TABLE 41.—Ratio of patient revenue to direct costs of various ancillary services, by type of control, 1962-66

Type of control and year	Operating room	Delivery room	Anesthesiology	Radiology	Laboratory	Physical therapy	Pharmacy
Nonprofit:							
1962-----	1.46	.93	1.70	1.40	1.77	1.37	2.19
1966-----	1.47	.88	1.56	1.33	1.71	1.27	2.12
Annual average, 1962-66-----	1.47	.91	1.61	1.38	1.74	1.31	2.15
For-profit:							
1962-----	1.65	1.80	2.25	1.76	1.93	1.63	2.36
1966-----	1.11	.30	1.74	1.30	1.59	3.23	1.89
Annual average, 1962-66-----	1.33	.87	1.83	1.52	1.78	2.55	1.73
State and local government:							
1962-----	1.33	1.04	1.33	1.21	1.46	.96	1.87
1966-----	1.11	.73	1.30	1.11	1.39	1.27	1.81
Annual average, 1962-66-----	1.20	.83	1.33	1.17	1.40	1.08	1.91

TABLE 42.—Ratio of patient revenue to direct costs of various ancillary services, by bed size of hospital, 1962–66

Bed size and year	Operating room	Delivery room	Anesthesiology	Radiology	Laboratory	Physical therapy	Pharmacy
6–99 beds:							
1962-----	1.49	1.00	1.64	1.40	1.80	1.61	2.49
1966-----	1.38	.85	1.59	1.30	1.76	1.71	2.24
Annual average, 1962–66-----	1.48	.91	1.64	1.37	1.82	1.51	2.24
100–199 beds:							
1962-----	1.36	.85	1.72	1.38	1.61	1.38	2.10
1966-----	1.38	.73	1.59	1.27	1.58	1.33	2.12
Annual average, 1962–66-----	1.37	.85	1.64	1.33	1.59	1.37	2.11
200–299 beds:							
1962-----	1.47	.84	2.02	1.35	1.69	1.67	2.34
1966-----	1.43	.76	1.61	1.34	1.55	1.35	2.30
Annual average, 1962–66-----	1.42	.77	1.75	1.36	1.62	1.50	2.31
300–499 beds:							
1962-----	1.41	1.21	1.57	1.44	1.71	1.24	2.00
1966-----	1.37	.91	1.49	1.34	1.60	1.38	1.97
Annual average, 1962–66-----	1.43	1.05	1.59	1.38	1.67	1.32	2.02
500 or more beds:							
1962-----	1.47	.95	1.19	1.27	1.68	.82	1.61
1966-----	1.31	.79	1.25	1.15	1.70	1.00	1.55
Annual average, 1962–66-----	1.33	.87	1.18	1.24	1.63	.89	1.56





**Appendix A**  
**QUESTIONNAIRE**



American Hospital Association, 840 N. Lake Shore Drive,  
Chicago, Illinois 60611

INSTRUCTIONS FOR COMPLETING THE HOSPITAL  
FINANCIAL QUESTIONNAIRE

1. The financial information should be derived from the hospital's annual reports and records. We realize that some of the information will not be available; however, it is very important to fill out the questionnaires as completely as possible.
  - a. When no records exist for a particular line or group of lines, even though the hospital had this asset, liability, or activity, please indicate this by placing "NO RECORDS" in the blank(s).
  - b. If, for an item for which no records exist, it is possible to make an estimate of the amount, please do so and add a capital E after the amount.
  - c. Please consider each line as independent of all others. The accounts do not have to balance in the ordinary accounting sense. For instance, it is possible that some hospitals will have records of cash balances and receivables, but not of their other current assets. The amounts of cash and receivables should be entered on the appropriate lines and "NO RECORDS" should be entered on line 5.
  - d. The characteristic of independency of each line should make it possible for hospitals not using fund accounting to conform to the questionnaire.

2. Enough forms are included in the kit to supply data for five fiscal years. For hospitals with fiscal years ending January through June, we request that the fiscal information be given for each of the years ending in 1962 through 1966. For hospitals with fiscal years ending July through December, we request that the fiscal information be given for each of the years ending in 1961 through 1965.
3. In those cases in which the hospital's account titles differ from the questionnaire, the hospital should exercise its judgment in selecting the account which most closely approximates the item in question.
4. If the hospital accounts have combined items that are broken out in the questionnaire, please indicate the combination on the questionnaire. For example if the hospital does not segregate equipment from buildings, simply record the total in one of the two blanks and record in the other "included in line number \_\_\_\_."
5. If the hospital accounts are more detailed than the questionnaire, please combine separate hospital accounts to conform logically with the questionnaire categorization.
6. Please round the data to the nearest dollar.
7. If you have any questions in filling out the forms, please feel free to place a collect call to Mr. B. E. Needles, CPA (312) 645-9695, who is a staff associate with the American Hospital Association.
8. All questionnaires should be returned by March 31, 1968 to the American Hospital Association, 840 N. Lake Shore Drive, Chicago, Illinois 60611.



HOSPITAL ECONOMIC STUDY: BEDS AND UTILIZATION

Name of Hospital \_\_\_\_\_

Address \_\_\_\_\_  
 Street City State Zip

1. In what year was your hospital established? \_\_\_\_\_  
 Year
2. If the hospital has changed its location since it was established, please give the year of the latest move. \_\_\_\_\_  
 Year
3. Indicate the number of beds by type (OB, pediatric, etc.) set up and staffed for use at the end of each of your fiscal years listed below. If a particular type of bed is not available write "none" by that type.

Type of bed	Fiscal Year						
	1960	1961	1962	1963	1964	1965	1966
Obstetrical							
Newborn Bassinets							
Pediatric <sup>/1</sup>							
Intensive Care <sup>/2</sup>							
All Other							
Total Beds							

<sup>/1</sup> Includes cribs as well as regular pediatric beds

<sup>/2</sup> Includes all beds used in the treatment of shock and trauma (burn wards, etc.)

4. If total beds set up and staffed for use, as reported in Item 3, INCREASED from the end of one fiscal year to the next (i.e., 1961-1962), please indicate the number of the additional beds and the source of additional physical space. <sup>/1</sup> If there was no increase, please state this.

Source of Additional Bed Space	Fiscal Year in Which New Beds were Added					
	1961	1962	1963	1964	1965	1966
New Construction						
Modification of Existing Facilities						
Merger with another Institution						

5. If total beds set up and staffed for use, as reported in Item 3, DECREASED from the end of one fiscal year to the next (i.e., 1961-1962), please indicate the number of beds decreased <sup>/1</sup> and the disposition of the space. If there was no decrease, please state this.

Disposition of Space	Fiscal Year in Which Beds Decreased					
	1961	1962	1963	1964	1965	1966
Space Closed						
Space Used for Administrative Services						
Medical Services						
Other						

<sup>/1</sup> Report only those decreases that were considered permanent at the time of decrease.

6. Please report the following utilization information for each of the fiscal years given below.

Hospital	Fiscal Year					
	1961	1962	1963	1964	1965	1966
Admissions-Total						
Under age 65						
Age 65 and over						
Inpatient Days - Total						
Under age 65						
Age 65 and over						
Births						
Outpatient Visits						
Under age 65						
Age 65 and over						

7. If your hospital has or had an extended care facility<sup>/1</sup> that is owned and administered by the hospital, indicate the number of beds set up and staffed for use at the end of each of your fiscal years. If none, please state this.

Extended Care Facility	Fiscal Year						
	1960	1961	1962	1963	1964	1965	1966
Number of Beds							
Admissions-Total							
Under age 65							
Age 65 and over							
Inpatient Days - Total							
Under age 65							
Age 65 and over							

<sup>/1</sup> An extended care facility is defined as an organized unit(s) of the hospital with permanent facilities that include inpatient beds; and with medical services, including physician services and continuous nursing services, to provide treatment for patients who require inpatient care, but who are not in an acute phase of illness and who currently require primarily convalescent or restorative services.

8. If your hospital has or had a home care program,<sup>/1</sup> please indicate the number of patients admitted and the number of home care visits in each fiscal year. If your hospital has or had no such program, please state this.

Home Care Program	Fiscal Year					
	1961	1962	1963	1964	1965	1966
No. of pts. admitted-Total						
Under age 65						
Age 65 and over						
No. of home-care visits-Total						
Under age 65						
Age 65 and over						

- <sup>/1</sup> A home care program is defined as an organized unit(s) of the hospital, with permanent facilities and with medical services, including nursing services and other professional and technical services, to provide treatment for patients in their place of residence.



9. Please report the number of regularly employed personnel, excluding trainees, private duty nurses, and volunteers, at the end of each of your fiscal years.

Personnel	Fiscal Year						
	1960	1961	1962	1963	1964	1965	1966
a. Administrative & General:							
Full-time							
Part-time							
b. Dietary:							
Full-time							
Part-time							
c. Household & Property:							
Full-time							
Part-time							
d. Professional Care of Patients (Inpatient and Outpatient):							
Full-time							
Part-time							
e. Other:							
Full-time							
Part-time							
f. Total (a+b+c+d+e):							
Full-time							
Part-time							

10. Please report expenses for salary and wages for each of the fiscal years.

	Fiscal Year						
	1960	1961	1962	1963	1964	1965	1966
a. Administrative & General							
b. Dietary							
c. Household & Property							
d. Professional Care of Patient (Inpatient and Outpatient)							
e. Other							
f. Total (a+b+c+d+e)							

HOSPITAL ECONOMIC STUDY

Hospital Name \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

Zip \_\_\_\_\_

I. FUND BALANCE SHEETS

A. GENERAL FUND BALANCE SHEET (Omit Cents)	As of Date	
	Mo.	Yr.
ASSETS:		
1. Cash . . . . .	\$	_____
2. Cash imprest funds . . . . .		_____
3. Temporary investments . . . . .		_____
4. Accounts and notes receivable - patients in hospital . . . \$		_____
a. Direct insurance . . . . .		_____
b. Direct patient . . . . .		_____
c. Welfare - County and State . . . . .		_____
d. All other . . . . .		_____
5. Accounts and notes receivable - patients discharged . . .		_____
a. Direct insurance . . . . .		_____
b. Direct patient . . . . .		_____
c. Welfare - County and State . . . . .		_____
d. All other . . . . .		_____
6. Other accounts and notes receivable . . . . .		_____
7. TOTAL . . . . . \$		_____
8. Less: Allowance for uncollectible accounts receivable . .		_____
9. Net accounts and notes receivable . . . . .		_____
10. Accrued interest receivable . . . . .		_____
11. Inventory - supplies . . . . .		_____
12. Prepaid expenses . . . . .		_____
13. Other assets . . . . .		_____
14. Due from other funds (specify) . . . . .		_____
15. TOTAL . . . . .	\$	_____
LIABILITIES AND GENERAL FUND BALANCE:		
16. Accounts payable . . . . .	\$	_____
17. Salaries, wages and fees payable . . . . .		_____
18. Withholding taxes payable . . . . .		_____
19. Social security taxes payable . . . . .		_____
20. Notes and loans payable . . . . .		_____
21. Accrued expenses payable . . . . .		_____
22. Deferred income . . . . .		_____
23. Other general fund liabilities (specify) . . . . .		_____
24. Due to other funds (specify) . . . . .		_____
25. Sub-Total . . . . .	\$	_____
26. General fund balance at end of fiscal year . . . . .		_____
27. TOTAL . . . . .	\$	_____

PLEASE MAKE CERTAIN THAT ALL BLANKS HAVE AN ENTRY AS PER INSTRUCTIONS

Hospital Name \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

B. TEMPORARY FUND BALANCE SHEET (Omit Cents)		As of Date
		Mo. Yr.
ASSETS:		
1. Cash . . . . .		\$ _____
2. Investments . . . . .		_____
3. Accrued interest receivable . . . . .		_____
4. Due from other funds (specify) . . . . .		_____
5. TOTAL . . . . .		\$ _____
LIABILITIES AND TEMPORARY FUND BALANCE:		
6. Due to other funds (specify) . . . . .		\$ _____
7. TEMPORARY FUND BALANCE . . . . .		\$ _____
C. ENDOWMENT FUND BALANCE SHEET (Omit Cents)		
ASSETS:		
1. Cash . . . . .		\$ _____
2. Investments (at book value)		
a. Stocks . . . . .		_____
b. Bonds . . . . .		_____
c. Mortgages . . . . .		_____
d. Real Estate . . . . .		_____
3. Due from other funds (specify) . . . . .		_____
4. TOTAL . . . . .		\$ _____
LIABILITIES AND ENDOWMENT FUNDS:		
5. Mortgages or accounts payable . . . . .		\$ _____
6. Due to other funds (specify) . . . . .		_____
7. Principal - endowment funds for general purposes . . . . .		_____
8. Principal - endowment funds for restricted purposes . . . . .		_____
9. TOTAL . . . . .		\$ _____

PLEASE MAKE CERTAIN THAT ALL BLANKS HAVE AN ENTRY AS PER INSTRUCTIONS

Hospital Name \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

D. PLANT FUND BALANCE SHEET (Omit Cents) As of Date \_\_\_\_\_  
Mo. \_\_\_\_\_ Yr. \_\_\_\_\_

ASSETS: (if not valued at historical cost indicate, after title, the basis for valuation)		
1. Land		\$ _____
2. Land improvements		\$ _____
3. Less: Accumulated depreciation of land improvements	( )	_____
4. Buildings		\$ _____
5. Less: Accumulated depreciation of buildings	( )	_____
6. Fixed equipment		\$ _____
7. Less: Accumulated depreciation of fixed equipment	( )	_____
8. Automobiles and trucks		\$ _____
9. Less: Accumulated depreciation of autos and trucks	( )	_____
10. Major movable equipment (depreciable)		\$ _____
11. Less: Accumulated depreciation of major movable equip.	( )	_____
12. Minor equipment (non-depreciable)		\$ _____
13. Plant assets under construction	( )	_____
14. Assets restricted for improvement, replacement & expansion of plant		_____
15. Due from other funds (specify)		_____
16. TOTAL		\$ _____
LIABILITIES AND PLANT FUND BALANCE:		
17. Accounts payable - plant		\$ _____
18. Bonds payable		_____
19. Mortgages payable		_____
20. Plant improvement and replacement liabilities		_____
21. Due to other funds (specify)		_____
22. Capital - invested in plant		_____
23. Reserves for plant improvement and expansion		_____
24. TOTAL		\$ _____

PLEASE MAKE CERTAIN THAT ALL BLANKS HAVE AN ENTRY AS PER INSTRUCTIONS



Hospital Name \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

II. GENERAL FUND OPERATIONS

For the Fiscal Year Ending \_\_\_\_\_

Mo. \_\_\_\_\_ Yr. \_\_\_\_\_

A. STATEMENT OF REVENUES AND EXPENSES (Omit Cents)

1. Total patient revenues		
Patient Revenue Classified by Method of Payment		
a. Direct Insurance . . . . .	\$ _____	
b. Direct Patient . . . . .	_____	
c. Welfare - County and State . . . . .	_____	
d. All Other . . . . .	_____	
e. Total patient revenues . . . . .		\$ _____
2. Less: Allowances and discounts on patients' accounts		
Type of Allowance and Discount		
a. Contractual Allowances		
aa. Direct Insurance . . . . .	\$ _____	
bb. Direct Patient . . . . .	_____	
cc. Welfare . . . . .	_____	
dd. Other . . . . .	\$ _____	
b. Provision for Bad Debts . . . . .	_____	
c. Employee Discounts . . . . .	_____	
d. Other Adjustments (specify) . . . . .	_____	
e. Total Allowances & Discounts on Patients Accounts . . . . .		_____
3. Net patient revenues . . . . .		\$ _____
4. Less: Total operating expenses . . . . .		_____
5. Net income from service to patients . . . . .		\$ _____
6. Other income:		
7. Contributions, donations, bequests, etc. . . . .	_____	
8. Income from investments . . . . .	_____	
9. Tuition fees . . . . .	_____	
10. Revenue from meals sold to employees and guests . . . . .	_____	
11. Revenue from sale of drugs, supplies, etc. . . . .	_____	
12. Revenue from telephone and telegraph service . . . . .	_____	
13. Revenue from rental of nonpatient facilities . . . . .	_____	
14. Purchase discounts . . . . .	_____	
15. Other (specify) . . . . .	_____	
16. Total Other Income . . . . .		_____
17. Total of line 5 and 18 . . . . .		\$ _____
18. Other expenses (specify) . . . . .		_____
19. Net income (or loss) for the period (line 19 minus line 23) . . . . .		\$ _____

PLEASE MAKE CERTAIN THAT ALL BLANKS HAVE AN ENTRY AS PER INSTRUCTIONS

Hospital Name \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

For the Fiscal Year

Ending

Mo. Yr.

B. PATIENT REVENUES (Omit Cents)	C. OPERATING EXPENSES (Omit Cents)
Inpatient Revenues:	
1. Room and board . . . . . \$ _____	1. Administration and general . \$ _____
2. Operating rooms . . . . . _____	2. Dietary . . . . . _____
3. Delivery rooms . . . . . _____	3. Housekeeping department . . . _____
4. Anesthesiology . . . . . _____	4. Laundry department . . . . . _____
5. Radiology . . . . . _____	5. Linen service . . . . . _____
6. Laboratory . . . . . _____	6. Maintenance of personnel . . . _____
7. Basal metabolism . . . . . _____	7. Operation of plant . . . . . _____
8. Electrocardiology . . . . . _____	8. Motor service . . . . . _____
9. Physical therapy . . . . . _____	9. Repairs and maintenance . . . _____
10. Ambulance service . . . . . _____	10. Nursing service . . . . . _____
11. Medical and Surgical supplies . . . . . _____	11. Nursing education . . . . . _____
12. Pharmacy . . . . . _____	12. Medical & Surgical service . . . _____
13. Transfusion . . . . . _____	13. Pharmacy department . . . . . _____
14. Oxygen . . . . . _____	14. Medical records & library . . . _____
15. Blood and blood plasma . . . _____	15. Social service department . . . _____
16. Other (specify) . . . . . _____	16. Operating rooms . . . . . _____
Outpatient Revenues:	17. Delivery rooms . . . . . _____
17. Radiology . . . . . _____	18. Dept. of anesthesiology . . . . . _____
18. Laboratory . . . . . _____	19. Dept. of radiology . . . . . _____
19. Electrocardiology . . . . . _____	20. Laboratory department . . . . . _____
20. Physical therapy . . . . . _____	21. Basal metabolism . . . . . _____
21. Pharmacy . . . . . _____	22. Electrocardiology . . . . . _____
22. Emergency . . . . . _____	23. Physical therapy department . . . _____
23. Other (specify) . . . . . _____	24. Ambulance service . . . . . _____
24. Total patient revenues . \$ _____	25. Outpatient department . . . . . _____
	26. Emergency department . . . . . _____
	27. Depreciation of buildings . . . _____
	28. Depreciation of equipment . . . _____
	29. Interest . . . . . _____
	30. Rent . . . . . _____
	31. Other (specify . . . . . _____
	32. Total operating expenses* . \$ _____

\*If appropriate, record here total net value of voluntary services provided by members of religious orders included in total operating expenses. . . . . \$ \_\_\_\_\_

PLEASE MAKE CERTAIN THAT ALL BLANKS HAVE AN ENTRY AS PER INSTRUCTIONS

Hospital Name \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

Zip \_\_\_\_\_

III. ANALYSIS OF TOTAL PLANT FUND ASSETS (Omit Cents)

For the Fiscal Year  
Ending \_\_\_\_\_

Mo. \_\_\_\_\_ Yr. \_\_\_\_\_

A. SOURCE OF PLANT FUND ASSETS (Omit Cents)

1. Gross Borrowing (by source)

a. From profit-seeking enterprises . . . . . \$ \_\_\_\_\_

b. From federal government agencies . . . . . \_\_\_\_\_

c. From state and local government . . . . . \_\_\_\_\_

d. From philanthropic organizations . . . . . \_\_\_\_\_

e. From religious organizations . . . . . \_\_\_\_\_

f. Other (specify) . . . . . \$ \_\_\_\_\_

2. Capital Grants (by source)

a. Hill-Burton . . . . . \_\_\_\_\_

b. Other federal agencies . . . . . \_\_\_\_\_

c. State and Local government . . . . . \_\_\_\_\_

d. Community fund raising . . . . . \_\_\_\_\_

e. Philanthropic organizations . . . . . \_\_\_\_\_

f. Religious organizations . . . . . \_\_\_\_\_

g. Other (specify) . . . . . \$ \_\_\_\_\_

3. Current periods funded depreciation (if any) . . . . . \_\_\_\_\_

4. Transfers from General Fund . . . . . \_\_\_\_\_

5. Transfers from Other Funds . . . . . \_\_\_\_\_

6. Appraisal Increment . . . . . \_\_\_\_\_

7. Other (specify) . . . . . \_\_\_\_\_

8. Total Additions to Plant Fund Assets . . . . . \$ \_\_\_\_\_

B. REDUCTION OF PLANT FUND ASSETS (Omit Cents)

1. Retirement or loss of plant fund assets (gross less account  
depreciation on these assets) . . . . . \_\_\_\_\_

2. Retirement of debt . . . . . \_\_\_\_\_

3. Credit to depreciation for current year's depreciation charge . . . . . \_\_\_\_\_

4. Transfers to General Fund . . . . . \_\_\_\_\_

5. Other (specify) . . . . . \_\_\_\_\_

6. Total reductions in plant fund assets . . . . . \$ \_\_\_\_\_

C. CHANGE IN PLANT FUND ASSETS (line A8 minus line B6) . . . . . \_\_\_\_\_

D. BEGINNING BALANCE OF TOTAL PLANT FUND ASSETS . . . . . \_\_\_\_\_

E. ENDING BALANCE OF TOTAL PLANT FUND ASSETS . . . . . \$ \_\_\_\_\_

PLEASE MAKE CERTAIN THAT ALL BLANKS HAVE AN ENTRY AS PER INSTRUCTION

[illegible]

Hospital Name \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

	V. RECONCILIATION OF FUND BALANCES (Omit cents)			As of Date	
				Mo.	Yr.
	A General Fund	B Temporary Fund	C Endowment Fund		
1. Fund Balance (principal-capital) at beginning of fiscal (calendar) year per balance sheet . . . . .	\$ _____	\$ _____	\$ _____		
2. Total Revenue . . . . .	\$ _____	\$ _____	\$ _____		
3. Net Expenses . . . . .	_____	_____	_____		
4. Net Income (Loss) . . . . .	_____	_____	_____		
5. TOTAL	\$ _____	\$ _____	\$ _____		
6. Additions (credit adjustments)					
7.	\$ _____	\$ _____	\$ _____		
8.	_____	_____	_____		
9.	_____	_____	_____		
10.	_____	_____	_____		
11. Total Additions . . . . .	_____	_____	_____		
12. Sub Total . . . . .	\$ _____	\$ _____	\$ _____		
13. Deductions (Debit adjustments)					
14.	\$ _____	\$ _____	\$ _____		
15.	_____	_____	_____		
16.	_____	_____	_____		
17. Total Deductions . . . . .	_____	_____	_____		
18. Fund Balance (principal-capital) at end of fiscal (calendar) year per Balance Sheet . . . . .	\$ _____	\$ _____	\$ _____		

PLEASE MAKE CERTAIN THAT ALL BLANKS HAVE AN ENTRY AS PER INSTRUCTIONS



Hospital Name \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

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VI. TYPE OF AUDIT

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The financial data furnished in response to this questionnaire represents information extracted from:

Certified statements ☐

Auditor prepared, but non-certified statements ☐

Hospital prepared non-certified statements ☐

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## Appendix B

### METHODOLOGY

IN ORDER to analyze the impact of the Medicare program on hospital financial operations, the Social Security Administration contracted with the American Hospital Association to obtain audited data on hospital revenues, expenses, and capital assets for a representative sample of hospitals in the United States. Permission was given by participating hospitals for the American Hospital Association to receive data for the 5 fiscal years preceding the introduction of Medicare in July 1966 directly from firms auditing hospital operations, with the assurance that confidentiality of data on individual hospitals would be maintained. In addition, information on hospital beds, utilization, personnel, and payroll expenses were obtained directly from the individual hospitals for the same period. The questionnaire used in the survey is reproduced in appendix A.

#### Sample design

The sampling frame comprised all hospitals meeting the following criteria: (1) certified by the American Hospital Association in 1967, (2) short-term nonpsychiatric community hospitals (hospitals operated by the Federal Government were excluded), and (3) certified by the Medicare program. The Medicare certification distinguishes this group from all community hospitals listed in American Hospital Association's annual Guide Issues. Table B.1 contrasts the distribution of hospitals and beds by ownership control and bed size of the sample universe with all community hospitals. The Medicare-certified group has a lower proportion of small hospitals and for-profit hospitals.

An attempt was made to supplement this sample with hospitals which were Medicare-certified providers but not American Hospital Association certified hospitals. These hospitals are primarily osteopathic hospitals

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NOTE: Appendix B is based on the methodology section of Richard W. Foster and Belverd Needles, Jr., "The Financial Structure of American Community Hospitals: 1962-1966," mimeographed, American Hospital Association, 1971.

TABLE B-1.—Distribution of hospitals and beds in sample universe, by stratum, 1965

Stratum	Distribution of all hospitals				Distribution by control			
	Hospitals		Beds		Hospitals		Beds	
	Survey universe	Guide Issue	Survey universe	Guide Issue	Survey universe	Guide Issue	Survey universe	Guide Issue
All hospitals.....	100.0	100.0	100.0	100.0	-----	-----	-----	-----
6-99 beds.....	58.2	60.8	20.7	22.2	-----	-----	-----	-----
100-199 beds.....	20.4	19.3	20.7	20.7	-----	-----	-----	-----
200 or more beds.....	21.5	19.9	58.7	57.0	-----	-----	-----	-----
Nonprofit.....	61.3	59.7	69.8	69.5	100.0	100.0	100.0	100.0
6-99 beds.....	29.3	29.8	11.2	11.7	47.8	49.9	16.1	16.9
100-199 beds.....	14.9	13.9	15.3	15.2	24.2	23.3	21.9	21.9
200-299 beds.....	8.2	7.7	14.6	14.5	13.4	12.9	20.9	20.9
300-499 beds.....	7.0	6.6	19.0	18.8	11.4	11.0	27.2	27.1
500 or more beds.....	2.0	1.7	9.8	9.2	3.2	2.9	14.0	13.3
For-profit.....	12.5	14.9	5.6	6.3	100.0	100.0	100.0	100.0
6-49 beds.....	7.0	9.4	1.5	2.0	56.2	63.0	27.4	32.3
50-99 beds.....	3.5	3.6	1.8	2.0	28.0	24.2	32.1	31.0
100-199 beds.....	1.6	1.6	1.6	1.6	12.4	10.4	27.6	26.2
200 or more beds.....	.4	.4	.7	.7	3.5	2.5	12.9	10.4
State and local government.....	26.2	25.3	24.5	24.2	100.0	100.0	100.0	100.0
6-99 beds.....	18.4	18.0	6.2	6.5	70.4	71.0	25.4	26.8
100-199 beds.....	3.9	3.8	3.8	3.9	14.8	15.1	15.3	16.3
200-299 beds.....	1.5	1.4	2.6	2.6	5.7	5.6	10.7	10.9
300-499 beds.....	1.1	1.0	3.1	2.9	4.3	3.9	12.4	11.9
500 or more beds.....	1.3	1.1	8.9	8.3	4.8	4.4	36.2	34.1

and hospitals with fewer than 6 beds. Extremely low sampling response of this group led to a decision to restrict the sample to the original sample of hospitals certified by both Medicare and the American Hospital Association.

The sampling elements for this study were individual hospitals. Data were collected for the base period of the study from all sample hospitals. Originally, the sampling elements were organized into 40 strata. Stratification was on the basis of: (1) ownership control (non-Federal governmental, for-profit, Catholic nonprofit, and other nonprofit); (2) bed size in 1965 (6 to 99 beds, 100 to 199 beds, 200 to 299 beds, 300 to 499 beds, 500 or more beds for the nonprofit hospitals; for State and local government hospitals, the 500-or-more group was split into two groups, 500 to 999 beds and 1000 or more beds; in the case of for-profit hospitals, the 6 to 99 bed group was split into 6 to 49 beds and 50 to 99 beds); (3) financial growth (whether the ratio of total hospital expenses in 1965 to total hospital expenses in 1960 was greater than or less than 1.53). The stratification on the basis of financial growth was later discarded because of missing expense information on almost 40 percent of the sampling frame hospitals. Preliminary projection of expenses based on the financial growth stratification yielded estimates substantially similar to those based on the collapsed growth rate strata. The selection within each of the 40 strata was an equal probability selection of hospitals.

A total of 462 hospitals were sampled. The number of hospitals sampled within each stratum was determined on the basis of the number of beds falling in that stratum and the variability of hospitals with respect to bed size within the stratum. This procedure results in more intensive sampling of those strata which have the greatest effect on aggregate estimates. As a consequence, aggregate estimates are generally more reliable than those of individual strata.

### Sampling response

Table B.2 indicates the participation of hospitals by stratum. Participation in the largest State and local government bed-size category and in for-profit hospitals was particularly low. Only 15 for-profit hospitals submitted data, representing 31 percent of sampled for-profit hospitals. Fifty hospitals failed to respond because of inadequate records. An additional 75 hospitals either provided no response or a negative response. Nonresponse or a negative response from the auditor accounted for another 18 hospitals. Thirteen hospitals gave other reasons for non-participation. The low response rate of large State and local government hospitals is attributed to difficulties in reporting information in the form requested.

TABLE B-2.—Participation by stratum, 1965

Stratum	Sample size	Partici- pants	Participation as percentage of—	
			Sample	All par- ticipation
Total.....	462	306	66.2	100.0
State and local government.....	125	69	55.2	22.5
6-99 beds.....	53	36	67.9	11.8
100-199 beds.....	15	9	60.0	2.9
200-299 beds.....	7	4	57.1	1.3
300-499 beds.....	9	6	66.7	2.0
500-999 beds.....	20	10	50.0	3.3
1,000 or more beds.....	21	4	19.0	1.3
Catholic.....	66	49	74.2	16.0
6-99 beds.....	15	10	66.7	3.3
100-199 beds.....	17	12	70.6	3.9
200-299 beds.....	11	6	54.5	2.0
300-499 beds.....	15	14	73.3	4.6
500 or more beds.....	8	7	87.5	2.3
Other voluntary.....	223	173	77.6	56.5
6-99 beds.....	77	50	64.9	16.3
100-199 beds.....	43	30	69.8	9.8
200-299 beds.....	21	19	90.5	6.2
300-499 beds.....	37	34	91.9	11.1
599 or more beds.....	45	40	88.9	13.1
For-profit.....	48	15	31.3	4.9
6-49 beds.....	17	4	23.5	1.3
50-99 beds.....	13	3	23.1	1.0
100-199 beds.....	12	4	33.3	1.3
200 or more beds.....	6	4	66.7	1.3

## Estimation

The principal method of estimation of aggregate values based upon sample data was the separate ratio estimate method based upon number of hospital beds. The average value of each variable per bed of all hospitals within a stratum was multiplied by the number of hospital beds in the stratum universe. Overall aggregates for all U.S. community hospitals (certified by Medicare) were obtained by summing the individual stratum aggregates. Experimentation with other methods of projection of the sample data, including the reciprocal of the probability of selection adjusted for sampling response, did not perform as well as the separate ratio estimate method based upon comparable data from the American Hospital Association's Guide Issues.

One difficulty encountered in the study was a tendency for hospitals to lump one or more items together (such as laundry and linen expenses). One procedure which might have been used to infer the appropriate breakdown would be to apply the percentage breakdown of those hospitals in the stratum which listed the components separately to all other hospitals in the stratum. This procedure was not followed because of an insufficient number of hospitals providing the required breakdowns. Instead, for hospitals combining data on two or more items in one item, the combined item was treated as if it represented only data for that item while the other items were treated as nonresponse items. Aggregate values of the components for the stratum were then compared with aggregate values of the sums of the components. If the sum of the estimated components was within 10 percent of the estimated total, components estimated on this basis were shown. Where the sum was more than 10 percent different from the estimated total, it was assumed that the bias introduced by partial reporting was too serious to permit any attempted breakdown.

Since only hospitals certified for Medicare participation were included in the sample, it was necessary to make some assumption about the number of hospitals and beds in the universe in the pre-Medicare period. The proportion of all community hospitals certified by Medicare at the end of the period was applied to the number of community hospitals in the pre-Medicare years to obtain the universe of all community hospitals (potentially certifiable by Medicare) in the pre-Medicare period.

## Reliability of the estimates

Since the estimates presented here are based on samples, they may differ somewhat from the figures that would have been obtained from all hospitals in the universe. As in all survey work, the results are subject to errors of response and nonreporting as well as sampling variability. Table B.3 indicates the approximate standard errors of hospital expenses in 1962 and 1966 for all U.S. community hospitals as well as by control and by bed size.



TABLE B-3.—Approximate standard errors of total expenses, by type of control and bed size of hospital, 1962 and 1966

Type of control and bed size	Total expenses (in millions)			
	Estimated value		Estimated standard error	
	1962	1966	1962	1966
All hospitals.....	\$6,456	\$9,661	\$108	\$175
Control:				
Nonprofit.....	4,545	6,818	82	135
For-profit.....	225	402	23	37
State and local government.....	1,686	2,439	66	105
Bed size:				
6-99 beds.....	1,037	1,402	46	55
100-199 beds.....	1,197	1,734	45	66
200-299 beds.....	1,285	1,764	54	83
300-499 beds.....	1,447	2,342	39	77
500 or more beds.....	1,490	2,419	55	101

The standard error of the aggregate estimate for a given stratum is given by:

$$er(\hat{A}_h) = B_h \cdot er(\bar{y}_h)$$

$$= B_h \sqrt{\frac{N_h^2(1-f_h)}{n_h B_h^2} \left[ \frac{\sum_{i=1}^{n_h} (A_{hi} - \bar{y}_h b_{hi})^2}{n_h - 1} \right]}$$

where  $N_h$  = number of hospitals in stratum  $h$  of universe

$n_h$  = number of hospitals in stratum  $h$  of sample responding

$B_h$  = number of beds in stratum  $h$  of universe

$b_h$  = number of beds in stratum  $h$  of sample responding

$b_{hi}$  = number of beds in  $i$ th sample hospital of stratum  $h$

$A_{hi}$  = value of the variable in the  $i$ th sample hospital of stratum  $h$

$$f_h = n_h / N_h$$

$$w_h = B_h / \sum_{h=1}^L B_h$$

$$\bar{y}_h = \sum_{i=1}^{n_h} A_{hi} / \sum_{i=1}^{n_h} b_{hi}$$

$$\hat{A}_h = B_h \bar{y}_h$$

When combining strata, the standard error of the aggregate estimate for all community hospitals is given by:

$$\begin{aligned} er(\hat{A}) &= \left( \sum_{h=1}^L B_h \right) \cdot er(\bar{y}) \\ &= \left( \sum_{h=1}^L B_h \right) \sqrt{\sum_{h=1}^L w_h^2 [er(\bar{y}_h)]^2} \end{aligned}$$

where  $\hat{A} = \sum_{h=1}^L \hat{A}_h$

$$\bar{y} = \hat{A} / \sum_{h=1}^L B_h = \sum_{h=1}^L w_h \bar{y}_h$$

### Comparison of sample results with Guide Issue data

Sample results may differ from those presented for all community hospitals in the annual Guide Issues of the journal *Hospitals* for two major reasons: (1) the sample universe is restricted to those hospitals certified by the Medicare program, and (2) the reporting period differs slightly between the two groups. The first difference has been illustrated above by table B.1. Hospitals in the sample were requested to provide data for the 5 fiscal years prior to the introduction of the Medicare program in July 1966. If the hospital's fiscal year ended between January and June, data for 1962-66 were reported. If the hospital's fiscal year ended between July and December, data for 1961-65 were requested. Data for the Guide Issues reflect data for fiscal years ending by September of each year. The sample data, therefore, fall approximately one-half year before the corresponding Guide Issue data.

Table B.4 compares estimates of beds and total expenses from the survey for 1966 with the average of Guide Issue data for all community hospitals between 1965 and 1966. The bed column indicates the difference between the two sets of hospitals caused by the Medicare certification requirement. Overall the sample universe contained 2 percent fewer beds than all community hospitals. Differences were particularly marked for for-profit and small hospitals. Twelve percent of the beds in for-profit hospitals were excluded from the sample universe because of the Medicare certification requirement. Similarly, 8 percent of the hospitals with 6 to 99 beds were excluded.

As indicated in table B.4 the survey estimate of State and local government hospital expenses was higher than that reported in the Guide Issue. This difference cannot be explained by differences in total beds in the two groups (less than 1 percent of beds of community hospitals are excluded

TABLE B-4.—Comparison of total expenses between survey data for 1966 and average Guide Issue data for 1965 and 1966

Type of control and bed size	Survey universe beds as percent of Guide Issue beds	Total expenses	
		Survey standard errors as percent of Guide Issue value	Difference between survey estimate and Guide Issue value as percent of Guide Issue value
All hospitals.....	-2.1	1.7	-1.4
Control:			
Nonprofit.....	-1.7	1.9	-5.1
For-profit.....	-12.0	6.9	-30.6
State and local government.....	-.8	4.9	18.0
Bed size:			
6-99 beds.....	-8.3	3.5	-9.3
100-199 beds.....	-3.1	3.6	-9.9
200-299 beds.....	-1.4	4.5	-4.3
300-499 beds.....	-.7	3.2	-3.0
500 or more beds.....	4.3	4.9	16.8

from the sample). Nor is it solely attributable to the standard error. Instead the major explanation appears to be a difference in the size distribution of beds within the State and local government control. The sample universe contains a much higher proportion of large State and local hospitals. As shown in table B.1, beds in State and local government hospitals with 300 or more beds constitute 48.6 percent of all the sample universe State and local government beds but only 46.0 percent of all State and local government beds reported in the *Hospitals* Guide Issue. The greater concentration of large hospitals leads to a higher estimate of expenses since larger hospitals tend to have higher total expenses.

The greater concentration of large State and local government hospitals also helps to explain the finding noted in section III that government hospital expenses per patient day are higher than those of non-profit hospitals (unlike data reported in the Guide Issue). Although large nonprofit hospitals also represent a slightly higher proportion of all nonprofit hospitals in the sample universe, it is not true to as great an extent as for State and local government hospitals.



Appendix C

BASIC DATA TABLES



TABLE C-1.—Hospital beds and utilization, by type of control, 1962-66

Type of control and year	Beds						Utilization (in thousands)			
	Total beds <sup>1</sup>	Obstetrical	Newborn bassinets	Pediatric	Intensive care	Other beds	Admissions	Inpatient days	Births	Outpatient visits
<b>United States:</b>										
1962-----	652,131	85,345	103,472	61,626	3,845	501,315	24,634	184,835	3,819	69,748
1963-----	671,496	84,191	102,473	63,600	8,557	514,949	25,018	187,017	3,633	72,898
1964-----	694,125	84,032	103,670	66,047	8,803	555,243	25,793	195,315	3,565	76,864
1965-----	715,276	83,816	103,178	68,025	11,012	552,423	26,746	203,765	3,564	83,345
1966-----	739,424	83,732	103,290	69,047	14,386	572,259	27,447	212,461	3,416	89,808
<b>Nonprofit:</b>										
1962-----	456,245	63,749	72,790	43,897	2,412	346,187	17,541	131,773	2,731	43,574
1963-----	469,892	62,475	72,338	46,218	4,740	356,459	17,768	133,715	2,603	45,496
1964-----	483,305	61,491	72,114	47,892	4,647	369,275	18,315	140,296	2,554	48,159
1965-----	498,296	61,237	71,726	49,527	6,378	381,154	18,793	144,454	2,519	50,956
1966-----	515,489	60,897	71,196	49,881	8,587	396,124	19,291	151,611	2,419	56,680
<b>For-profit:</b>										
1962-----	33,689	2,985	5,980	2,101	0	28,603	1,182	8,422	122	1,367
1963-----	36,498	3,079	5,405	2,157	0	31,263	1,266	8,699	102	1,880
1964-----	39,905	3,870	5,971	2,117	0	33,919	1,319	9,155	117	1,806
1965-----	40,569	3,768	6,068	1,942	163	34,696	1,577	10,436	146	2,052
1966-----	41,498	3,657	5,838	1,979	916	34,946	1,548	11,063	119	2,215
<b>State and local government:</b>										
1962-----	162,197	18,611	24,692	15,627	1,434	126,525	5,912	44,640	966	24,808
1963-----	165,106	18,637	24,731	15,225	4,018	127,227	5,984	44,603	928	25,723
1964-----	170,915	18,670	25,584	16,039	4,157	132,050	6,159	45,864	894	27,200
1965-----	176,411	18,812	25,385	16,557	4,470	136,573	6,377	48,875	899	30,337
1966-----	182,437	19,179	26,256	17,188	4,883	141,187	6,607	49,787	878	30,913

<sup>1</sup> Excludes newborn bassinets.

TABLE C-2.—Hospital beds and utilization, by bed size of hospital, 1962-66

Bed size and year	Beds						Utilization (in thousands)			
	Total beds <sup>1</sup>	Obstetrical	Newborn bassinets	Pediatric	Intensive care	Other beds	Admissions	Inpatient days	Births	Outpatient visits
6-99 beds:										
1962-----	143,220	22,671	33,071	7,369	114	113,066	5,723	34,526	985	9,229
1963-----	147,764	22,325	32,372	8,071	1,971	115,398	5,892	35,752	930	9,537
1964-----	150,170	22,007	32,292	7,854	1,616	118,693	5,803	35,328	845	8,934
1965-----	150,343	21,000	31,306	7,710	1,670	119,963	5,958	36,454	819	9,634
1966-----	150,934	20,557	30,991	7,721	2,023	120,633	5,929	36,808	746	8,743
100-199 beds:										
1962-----	138,474	18,531	22,459	15,401	586	103,956	5,491	37,062	780	10,793
1963-----	141,139	18,882	22,676	15,764	538	105,856	5,550	37,169	733	11,857
1964-----	144,484	18,959	23,230	16,306	378	108,751	5,876	40,165	779	12,970
1965-----	148,234	18,778	23,051	16,739	532	112,166	5,981	41,244	754	14,471
1966-----	150,886	19,131	22,817	17,075	1,496	113,184	6,161	43,341	728	15,780
200-299 beds:										
1962-----	124,345	18,079	19,754	14,314	505	91,447	5,210	38,812	837	16,254
1963-----	127,682	17,150	19,236	14,788	343	95,401	5,131	38,078	738	16,562
1964-----	129,850	16,769	19,261	14,557	874	97,651	5,319	39,983	749	17,288
1965-----	129,876	16,669	18,981	15,308	1,716	96,183	5,360	39,369	743	16,733
1966-----	132,560	16,345	19,003	14,947	2,388	98,880	5,465	40,966	712	18,293
300-499 beds:										
1962-----	131,123	15,726	16,894	13,121	796	101,480	4,676	39,231	688	12,153
1963-----	138,097	15,244	16,974	13,356	3,750	105,747	4,927	40,685	705	13,565
1964-----	145,749	15,357	17,206	14,077	3,398	112,918	5,035	43,041	674	14,562
1965-----	154,548	15,416	17,623	14,570	3,946	120,616	5,480	47,005	714	17,058
1966-----	163,158	15,401	17,527	14,665	5,048	128,044	5,654	49,149	687	20,298
500 or more beds:										
1962-----	114,969	10,337	11,294	11,420	1,845	91,367	3,533	35,203	518	21,320
1963-----	116,814	10,490	11,216	11,621	2,156	92,547	3,517	35,332	507	21,378
1964-----	123,872	10,941	11,681	13,164	2,537	97,230	3,739	36,799	518	23,090
1965-----	132,275	11,951	12,218	13,679	3,149	103,496	3,967	39,693	534	25,449
1966-----	141,886	12,298	12,952	14,640	3,432	111,516	4,239	42,196	542	26,694

<sup>1</sup> Excludes newborn bassinets.

TABLE C-3.—Hospital employees, by type and type of control, 1962-66

Type of control and year	Full-time employees						Part-time employees					
	Total	Adminis- trative	Dietary	House- hold and property	Profes- sional patient care	Other	Total	Adminis- trative	Dietary	House- hold and property	Profes- sional patient care	Other
United States:												
1962-----	1,153,106	100,710	122,319	164,603	674,510	90,964	180,367	14,861	22,941	11,871	120,053	10,641
1963-----	1,191,294	106,035	124,084	170,300	697,023	93,852	186,741	15,226	24,065	12,429	122,244	12,777
1964-----	1,257,124	111,532	127,862	178,423	742,767	96,540	207,502	16,383	26,897	13,085	137,225	13,913
1965-----	1,337,279	123,123	134,490	181,575	797,185	100,907	212,180	17,499	25,689	13,451	142,077	13,465
1966-----	1,400,842	133,307	136,678	187,623	825,210	118,024	236,642	20,649	27,252	16,025	154,400	18,316
Nonprofit:												
1962-----	795,937	72,470	85,979	120,828	468,227	48,433	150,840	12,356	19,778	10,129	99,473	9,104
1963-----	829,726	77,020	87,312	125,976	488,698	50,719	154,968	12,860	20,585	10,420	100,698	10,405
1964-----	874,667	79,994	90,195	132,070	519,279	53,130	170,377	13,837	23,135	10,895	111,063	11,377
1965-----	923,769	86,882	95,254	133,248	553,567	54,819	174,394	14,537	22,036	11,288	115,412	11,121
1966-----	969,633	91,204	96,700	137,257	574,963	69,509	194,509	16,685	23,257	12,985	126,067	15,515
For-profit:												
1962-----	41,739	5,795	4,984	5,206	24,065	1,689	2,663	350	386	65	1,695	167
1963-----	45,317	5,610	6,162	5,199	25,457	2,889	2,902	473	444	132	1,654	200
1964-----	48,565	5,992	6,081	5,345	28,002	3,146	5,007	589	548	127	3,440	303
1965-----	57,913	8,645	6,813	5,839	33,367	3,249	5,262	654	589	88	3,693	239
1966-----	57,807	8,486	6,117	6,688	33,863	2,653	6,085	918	719	268	3,836	344
State and local government:												
1962-----	315,430	22,444	31,356	38,569	182,217	40,844	26,864	2,156	2,777	1,677	18,883	1,371
1963-----	316,251	23,403	30,610	39,125	182,868	40,244	28,871	1,892	3,037	1,877	19,893	2,172
1964-----	333,892	25,547	31,585	41,009	195,486	40,265	32,120	1,947	3,155	2,063	22,723	2,233
1965-----	355,597	27,596	32,424	42,488	210,252	42,838	32,524	2,308	3,063	2,073	22,973	2,105
1966-----	373,402	33,618	33,861	43,679	216,382	45,862	36,048	3,046	3,276	2,772	24,497	2,457

TABLE C-4.—Hospital employees, by type and bed size of hospital, 1962-66

Bed size and year	Full-time employees					Part-time employees						
	Total	Adminis- trative	Dietary	House- hold and property	Profes- sional patient care	Other	Total	Adminis- trative	Dietary	House- hold and property	Profes- sional patient care	Other
6-99 beds:												
1962-----	189,226	20,864	21,900	25,457	109,927	11,078	47,425	3,277	5,686	4,038	30,658	3,766
1963-----	196,980	20,901	23,948	25,539	114,642	11,951	47,752	3,459	5,789	4,062	30,521	3,921
1964-----	196,077	21,092	23,373	25,927	112,722	12,963	54,438	3,640	6,944	4,174	35,891	4,039
1965-----	205,611	24,060	24,332	26,048	118,343	12,828	53,736	3,852	6,266	3,994	35,364	4,260
1966-----	205,064	23,635	22,878	26,228	120,237	12,086	53,796	3,852	7,771	4,691	39,354	4,541
100-199 beds:												
1962-----	216,915	19,660	25,407	30,373	129,175	12,300	48,438	3,602	5,872	4,572	31,062	3,330
1963-----	222,723	21,186	25,547	33,168	130,752	12,071	47,816	3,509	6,119	4,503	30,160	3,525
1964-----	239,411	23,246	27,177	34,941	142,403	11,645	52,777	3,733	6,329	4,944	33,927	3,844
1965-----	249,733	25,034	28,273	35,094	149,361	11,952	50,481	3,709	6,243	4,572	32,504	3,453
1966-----	257,105	25,663	28,500	36,053	154,280	12,609	57,243	4,392	6,142	6,050	36,399	4,260
200-299 beds:												
1962-----	233,156	18,319	24,453	35,668	144,389	10,327	39,729	3,068	5,843	1,257	28,798	763
1963-----	234,674	19,546	22,587	35,659	146,734	10,148	42,257	3,105	6,231	1,342	30,026	1,553
1964-----	249,025	19,900	22,784	37,737	157,105	11,498	48,101	3,225	7,692	1,580	33,731	1,872
1965-----	250,321	20,753	23,063	35,674	159,193	11,638	50,698	3,460	6,642	2,241	36,541	1,814
1966-----	253,071	22,537	23,290	34,968	154,948	17,328	55,418	4,047	6,690	2,344	38,515	3,852
300-499 beds:												
1962-----	249,965	22,106	27,005	39,787	141,544	19,523	29,119	3,364	3,632	1,493	18,743	1,887
1963-----	267,078	23,880	27,794	41,505	151,785	22,164	35,226	4,009	4,334	2,043	22,072	2,768
1964-----	280,765	25,751	29,268	43,058	162,885	19,803	36,714	4,542	4,505	1,859	22,894	2,914
1965-----	307,987	28,453	31,054	45,037	183,124	20,320	40,539	5,039	4,577	2,010	26,246	2,667
1966-----	334,021	30,660	32,254	47,523	195,467	28,117	37,873	4,679	4,036	1,951	23,435	3,772
500 or more beds:												
1962-----	263,844	19,761	23,554	33,318	149,474	37,737	15,656	1,550	1,909	511	10,791	895
1963-----	269,839	20,572	24,209	34,429	153,111	37,518	13,690	1,143	1,592	479	9,466	1,010
1964-----	291,847	21,544	25,260	36,762	167,651	40,631	15,476	1,243	1,677	528	10,783	1,245
1965-----	323,627	24,803	27,768	39,723	187,165	44,169	16,736	1,448	1,961	634	11,423	1,271
1966-----	351,580	30,812	29,757	42,851	200,277	47,883	24,318	2,126	2,613	990	16,698	1,891

TABLE C-5.—Hospital payroll expenses and full-time equivalent employees, by type of control, 1962-66

Type of control and year	Payroll expenses (in thousands)					Full-time equivalent employees						
	Total	Adminis- trative	Dietary	House- hold and property	Profes- sional patient care	Other	Total	Adminis- trative	Dietary	House- hold and property	Profes- sional patient care	Other
United States:												
1962-----	3,948,504	440,920	317,535	466,448	2,510,522	213,079	1,243,290	108,141	133,790	170,539	734,537	96,285
1963-----	4,261,210	445,272	344,217	510,354	2,760,886	200,481	1,284,665	113,648	136,117	176,515	738,145	100,241
1964-----	4,678,823	490,491	369,840	548,658	3,039,313	230,521	1,360,875	119,724	141,311	184,968	811,380	103,497
1965-----	5,162,431	554,041	408,767	591,045	3,430,476	268,102	1,443,369	131,873	147,335	188,301	868,224	107,640
1966-----	5,796,937	593,359	445,726	661,959	3,805,104	290,789	1,519,163	143,632	150,304	195,636	902,410	127,182
Nonprofit:												
1962-----	2,806,471	279,494	228,344	343,272	1,807,589	147,772	871,357	78,648	95,868	125,893	517,964	52,985
1963-----	3,043,193	306,974	247,098	373,836	1,985,493	129,793	907,210	83,450	97,605	131,186	539,047	55,922
1964-----	3,358,733	340,595	267,448	405,434	2,198,495	146,762	959,856	86,918	101,793	137,518	574,811	58,819
1965-----	3,657,009	381,094	295,188	341,482	2,473,409	165,835	1,010,966	94,151	106,272	138,892	611,273	60,380
1966-----	4,165,734	426,319	323,729	488,135	2,742,758	184,793	1,066,888	99,547	108,329	143,750	637,997	77,267
For-profit:												
1962-----	104,273	19,765	8,695	9,301	63,905	2,607	43,071	5,970	5,177	5,239	24,913	1,773
1963-----	122,854	22,032	10,387	12,299	74,477	3,658	46,768	5,847	6,384	5,265	26,284	2,989
1964-----	130,869	23,726	10,496	11,487	79,994	5,166	51,069	6,287	6,355	5,409	29,722	3,298
1965-----	162,467	29,778	12,720	12,385	101,587	5,998	60,544	8,972	7,108	5,883	35,214	3,369
1966-----	181,219	31,322	14,189	14,430	114,077	7,201	60,850	8,945	6,477	6,822	35,781	2,825
State and local government:												
1962-----	1,037,760	141,660	80,496	113,875	639,028	62,701	328,862	23,522	32,745	39,408	191,659	41,530
1963-----	1,095,163	116,265	86,732	124,219	700,916	67,030	330,687	24,349	32,129	40,064	182,815	41,330
1964-----	1,189,221	126,170	91,896	131,737	760,825	78,594	342,952	26,521	33,163	42,041	206,848	41,382
1965-----	1,342,955	143,169	100,859	147,178	855,480	96,269	371,859	28,750	33,956	43,526	221,739	43,891
1966-----	1,449,984	135,718	107,808	159,394	948,269	98,795	391,426	35,141	35,499	45,065	228,631	47,091



TABLE C-6.—Hospital payroll expenses and full-time equivalent employees, by bed size of hospital, 1962-66

Bed size and year	Payroll expenses (in thousands)						Full-time equivalent employees					
	Total	Adminis- trative	Dietary	House- hold and property	Profes- sional patient care	Other	Total	Adminis- trative	Dietary	House- hold and property	Profes- sional patient care	Other
6-99 beds:												
1962-----	587,842	73,099	48,400	61,017	381,946	23,380	212,939	22,503	24,743	27,476	125,256	12,961
1963-----	640,253	78,202	53,856	66,176	412,439	29,580	220,865	22,631	26,843	27,570	129,903	13,918
1964-----	667,383	82,885	56,084	67,452	427,240	33,722	223,296	23,722	26,720	28,014	130,668	14,958
1965-----	713,820	94,790	59,749	59,296	464,854	37,366	232,195	25,986	27,181	28,045	136,025	14,958
1966-----	765,817	100,553	63,315	79,062	485,522	37,366	235,945	26,338	27,764	28,574	139,914	14,357
100-199 beds:												
1962-----	712,318	72,480	58,306	79,065	450,062	52,405	241,134	21,461	28,343	32,659	144,706	13,965
1963-----	753,317	82,794	64,245	88,893	492,328	25,058	246,631	22,941	28,607	35,420	145,832	13,834
1964-----	844,460	94,110	71,596	97,972	552,904	27,878	265,802	25,113	30,342	37,413	159,367	13,567
1965-----	906,241	103,152	76,789	85,250	610,355	30,696	274,974	26,909	31,895	37,380	165,613	13,679
1966-----	1,019,830	113,234	84,660	110,984	676,729	34,223	285,727	27,859	31,571	39,078	172,480	14,739
200-299 beds:												
1962-----	819,321	79,068	64,507	102,077	538,749	34,920	253,021	19,853	27,375	36,297	158,788	10,709
1963-----	863,001	83,929	64,708	105,305	569,011	40,049	255,803	21,099	25,703	36,330	161,747	10,925
1964-----	932,940	89,587	67,207	112,281	619,922	43,944	273,076	21,513	26,630	38,527	173,971	12,434
1965-----	976,604	95,314	71,033	97,400	665,202	47,655	275,716	22,483	26,384	36,795	177,464	12,590
1966-----	1,099,246	105,079	76,710	124,817	741,076	51,564	280,795	24,561	26,635	36,140	174,206	19,254
300-499 beds:												
1962-----	877,920	81,812	72,769	115,451	559,788	48,100	264,525	23,788	28,821	40,534	150,916	20,467
1963-----	990,455	90,688	81,916	127,538	642,146	48,167	284,691	25,835	29,961	42,527	162,821	23,548
1964-----	1,079,373	98,189	86,828	135,537	704,287	54,533	299,122	28,022	31,521	43,988	174,332	21,260
1965-----	1,237,818	116,906	98,736	129,463	822,077	70,636	328,257	30,973	33,343	46,042	196,247	21,654
1966-----	1,415,916	135,151	109,284	170,598	918,255	82,628	352,958	33,000	34,272	48,499	207,185	30,003
500 or more beds:												
1962-----	951,102	134,461	73,554	108,837	579,976	54,274	271,672	20,536	24,509	33,574	154,870	38,185
1963-----	1,014,183	109,658	79,493	122,443	644,961	57,628	276,684	21,144	25,005	34,669	157,844	38,023
1964-----	1,154,865	125,720	88,126	135,416	734,960	70,444	299,355	22,166	26,069	37,028	173,043	41,254
1965-----	1,327,946	143,879	102,459	129,636	867,989	83,984	331,995	25,527	28,749	40,040	192,877	44,805
1966-----	1,496,128	139,343	111,756	176,498	983,523	85,008	363,746	31,875	31,064	43,352	208,626	48,829

TABLE C-7.—Statement of revenues and expenses, by type of control, 1962-66

[In thousands]

Item	All hospitals						Nonprofit hospitals					
	1962	1963	1964	1965	1966		1962	1963*	1964	1965	1966	
Total patient revenue-----	\$6,467,809	\$7,047,471	\$7,840,535	\$8,673,655	\$9,800,109		\$4,779,439	\$5,230,774	\$5,812,085	\$6,364,060	\$7,258,420	
Less: Contractual allowances-----	422,937	490,353	533,169	581,539	635,298		237,916	289,301	327,420	374,414	426,647	
Provision for bad debts-----	196,873	221,035	252,863	285,358	310,239		129,144	148,912	166,084	183,948	208,418	
Employees discounts-----	13,899	17,687	20,444	20,946	23,371		10,855	13,664	16,564	17,284	19,797	
Other adjustments-----	66,465	58,454	69,258	71,459	74,419		38,643	41,849	42,920	42,918	46,606	
Total allowances-----	700,174	787,530	875,735	959,302	1,043,327		436,558	493,726	552,988	618,564	701,470	
Net patient revenue-----	5,767,635	6,259,941	6,964,800	7,714,353	8,756,781		4,342,881	4,737,048	5,259,097	5,745,496	6,556,950	
Other revenue:												
Contributions-----	155,007	172,544	197,325	205,958	232,409		103,502	104,829	113,387	109,919	123,635	
Income from investments-----	57,107	59,470	66,325	72,314	90,132		54,532	56,962	63,401	68,647	85,396	
Tuition fees-----	23,038	24,455	32,249	36,624	42,344		19,709	20,444	27,866	31,972	37,140	
Meals sold to guests and employees-----	74,149	79,813	90,151	101,668	117,993		52,851	58,097	65,078	72,459	84,919	
Sale of drugs, supplies-----	13,215	17,506	17,448	20,514	23,272		7,105	7,183	8,916	10,910	12,897	
Telephone and telegraph services-----	7,747	8,613	9,536	10,322	13,449		5,963	6,399	7,071	7,661	9,206	
Rental of nonpatient facilities-----	24,632	25,919	28,539	29,244	28,111		13,256	15,953	18,638	19,948	19,954	
Purchase discounts-----	14,969	12,441	14,724	15,802	17,330		8,880	9,387	11,088	11,663	13,367	
Other-----	446,078	439,239	468,552	507,904	537,398		59,522	62,244	72,954	76,211	90,454	
Total other revenue-----	815,941	839,999	924,848	1,000,349	1,102,438		325,318	341,498	388,499	409,390	476,968	
Total revenue-----	6,583,576	7,099,940	7,889,648	8,714,702	9,859,219		4,668,199	5,078,546	5,647,596	6,154,886	7,033,918	
Total operating expenses-----	6,365,075	6,866,698	7,603,975	8,411,139	9,516,600		4,515,311	4,903,636	5,441,220	5,935,600	6,767,169	
Other expenses-----	91,400	105,505	109,592	126,752	144,231		29,606	36,528	37,397	45,626	50,571	
Total expenses-----	6,456,475	6,972,203	7,713,567	8,537,891	9,660,831		4,544,917	4,940,164	5,478,617	5,981,226	6,817,740	
Net income (or loss)-----	127,101	127,737	176,081	176,811	198,388		123,282	138,382	168,979	173,660	216,178	
Nonprofit hospitals												
Governmental hospitals												
Total patient revenue-----	\$254,164	\$301,049	\$326,451	\$396,579	\$433,363		\$1,434,206	\$1,515,647	\$1,701,998	\$1,913,017	\$2,108,326	
Less: Contractual allowances-----	7,947	8,845	8,947	11,105	7,929		137,075	192,207	196,801	196,021	200,722	
Provision for bad debts-----	10,682	12,350	15,123	19,522	14,014		57,046	59,773	71,656	81,889	87,807	
Employees discounts-----	1,172	950	1,307	1,630	498		2,872	3,074	3,250	3,061	3,076	
Other adjustments-----	4,637	922	1,307	1,337	776		23,185	15,684	25,031	27,205	27,035	
Total allowances-----	23,438	23,066	26,008	32,564	23,217		240,178	270,738	296,738	308,175	318,641	
Net patient revenue-----	230,726	277,983	300,443	364,015	410,146		1,194,028	1,244,909	1,405,260	1,604,842	1,789,686	



TABLE C-8.—Statement of revenue and expense, by bed size of hospital, 1962-66

[In thousands]

Item	6-99 beds					100-199 beds				
	1962	1963	1964	1965	1966	1962	1963	1964	1965	1966
<b>200-299 beds</b>										
Total patient revenue.....	\$1,093,673	\$1,220,749	\$1,286,821	\$1,359,461	\$1,496,068	\$1,230,761	\$1,310,601	\$1,489,216	\$1,630,556	\$1,814,665
Less: Contractual allowances.....	24,406	28,302	29,531	24,694	30,190	42,644	43,758	54,263	60,451	61,492
Provision for bad debts.....	42,569	45,890	45,726	56,900	55,420	43,713	55,252	62,605	65,221	65,093
Employees discounts.....	1,262	1,405	1,641	1,434	1,400	1,686	1,781	2,243	2,387	2,545
Other adjustments.....	5,244	5,935	4,321	3,978	4,923	8,859	7,804	7,094	8,381	9,315
Total allowances.....	73,481	81,472	81,819	87,006	92,023	96,902	108,594	126,204	136,440	138,443
New patient revenue.....	1,020,192	1,139,277	1,205,002	1,272,455	1,404,045	1,133,859	1,202,007	1,363,012	1,494,116	1,676,222
Other revenue:										
Contributions.....	22,113	21,226	24,148	15,642	12,811	40,061	38,550	40,788	43,429	51,119
Income from investment.....	6,735	6,376	6,630	6,732	8,388	7,740	8,869	8,814	12,075	12,790
Tuition fees.....	107	555	420	174	461	1,974	3,004	3,960	4,873	4,826
Meals sold to guests and employees.....	7,118	8,381	8,672	9,703	11,196	15,815	17,078	17,795	18,091	21,765
Sales of drugs, supplies.....	3,297	4,377	2,382	4,149	5,732	1,454	1,406	2,003	2,843	2,526
Telephone and telegraph services.....	3,630	7,748	922	1,026	1,112	1,649	1,569	1,715	1,965	2,095
Rental of nonpatient facilities.....	8,197	6,764	6,487	5,944	4,641	5,290	4,884	5,309	5,462	5,777
Other.....	16,708	17,485	16,077	2,350	2,281	4,711	2,628	3,009	3,127	3,412
Total other revenue.....	65,377	67,441	67,607	21,011	16,032	9,264	11,639	15,957	10,952	13,396
Total revenue.....	1,086,169	1,206,718	1,272,609	1,339,185	1,466,698	1,221,818	1,291,631	1,462,361	1,596,933	1,793,927
Total operating expense.....	1,032,385	1,159,104	1,205,215	1,275,096	1,388,547	1,185,523	1,250,832	1,412,500	1,542,618	1,722,161
Other expenses.....	5,084	7,759	5,834	8,839	13,304	11,132	12,658	12,793	13,290	12,312
Total expenses.....	1,037,469	1,166,863	1,211,049	1,283,935	1,401,851	1,196,655	1,263,490	1,425,293	1,555,908	1,734,473
Net income (or loss).....	48,700	39,855	61,560	55,250	64,847	25,163	28,141	37,068	41,025	59,454
<b>300-499 beds</b>										
Total patient revenue.....	\$1,281,453	\$1,375,041	\$1,554,955	\$1,622,332	\$1,822,245	\$1,552,597	\$1,722,699	\$1,895,117	\$2,202,171	\$2,481,312
Less: Contractual allowances.....	46,590	47,727	58,608	62,706	69,771	139,911	151,763	167,938	192,185	200,279
Provision for bad debts.....	27,168	28,047	37,688	36,087	39,255	37,611	40,221	43,461	65,265	71,613
Employees discounts.....	1,819	4,926	4,012	4,012	4,514	5,182	5,523	6,674	7,813	8,938
Other adjustments.....	10,344	9,233	7,910	7,868	8,509	12,094	15,054	19,332	19,799	20,037
Total allowances.....	85,921	89,932	109,332	110,734	122,050	194,797	212,562	237,405	285,062	300,867
Net patient revenue.....	1,195,532	1,285,109	1,445,596	1,511,598	1,700,195	1,357,800	1,510,137	1,657,712	1,917,109	2,180,445





TABLE C-8.—Statement of revenue and expense, by bed size of hospital, 1962-66—*Continued*

[In thousands]

Item	1962	1963	1964	1965	1966
	500 or more beds				
Total patient revenue-----	\$1,309,324	\$1,418,380	\$1,614,425	\$1,859,136	\$2,185,819
Less: Contractual allowances-----	169,386	218,803	222,769	241,443	273,566
Provision for bad debts-----	45,812	51,685	63,384	61,884	78,858
Employees discounts-----	3,951	4,052	4,793	5,300	5,887
Other adjustments-----	29,923	20,428	30,001	31,433	31,636
Total allowances-----	249,070	294,969	320,947	340,060	389,946
Net patient revenue-----	1,060,254	1,123,411	1,293,477	1,519,076	1,795,874
Other revenue:					
Contributions-----	51,823	71,459	89,003	101,351	116,291
Income from investment-----	18,152	19,354	22,219	26,135	32,214
Tuition fees-----	6,228	7,180	8,404	9,864	10,805
Meals sold to guests and employees-----	16,580	16,328	21,744	25,713	30,143
Sale of drugs, supplies-----	3,409	4,173	4,735	5,057	6,238
Telephone and telegraph services-----	1,685	1,983	2,237	2,450	2,681
Rental of nonpatient facilities-----	5,170	6,616	7,792	8,492	7,755
Purchase discounts-----	1,852	1,858	2,158	2,727	3,243
Other-----	314,128	278,354	299,264	338,421	359,464
Total other revenue-----	419,027	407,312	457,556	520,210	571,835
Total revenue-----	1,479,281	1,530,723	1,751,033	2,039,286	2,367,709
Total operating expense-----	1,450,736	1,502,939	1,725,488	1,995,061	2,336,075
Other expenses-----	39,018	51,321	55,542	67,423	83,142
Total expenses-----	1,489,754	1,554,260	1,781,030	2,062,484	2,419,217
Net income (or loss)-----	-10,473	-23,537	-29,997	-23,198	-51,508

TABLE C-9.—Departmental patient revenues, by type of control, 1962-66

[In thousands]

Type of control and year	Total patient revenues	Inpatient revenues										
		Room and board	Operating rooms	Delivery rooms	Anesthesiology	Radiology	Laboratory	Basal metabolismism	Electrocardiology	Physical therapy	Ambulance service	Medical and surgical services
United States:												
1962-----	\$6,467,809	\$3,049,018	\$348,016	\$100,127	\$153,858	\$418,483	\$622,645	\$4,120	\$79,776	\$43,846	\$2,411	\$205,971
1963-----	7,013,944	3,317,762	374,493	99,635	164,764	462,537	683,714	25,052	77,540	45,538	3,710	224,223
1964-----	7,806,947	3,718,672	407,266	99,497	176,134	516,341	759,247	4,761	106,248	54,890	4,238	242,406
1965-----	8,638,769	4,053,389	445,999	104,464	199,324	569,487	874,753	33,862	100,563	60,286	4,947	268,424
1966-----	9,800,109	4,546,708	502,285	108,257	225,174	643,538	983,954	65,710	117,048	72,369	4,816	298,287
Nonprofit:												
1962-----	4,779,439	2,314,943	266,338	78,037	115,366	317,869	464,465	3,802	64,605	35,534	2,012	147,002
1963-----	5,224,455	2,538,248	289,845	78,060	123,384	350,489	521,222	24,665	60,210	36,696	2,599	156,259
1964-----	5,807,775	2,830,707	321,697	80,205	132,435	395,432	587,088	4,363	87,519	43,649	2,447	170,935
1965-----	6,359,205	3,070,159	348,307	83,906	147,179	430,407	652,219	33,689	78,092	47,532	3,010	183,272
1966-----	7,258,420	3,455,571	393,933	87,110	164,526	483,783	742,266	52,165	90,589	55,109	2,790	206,391
For-profit:												
1962-----	254,164	127,844	12,970	3,091	5,825	18,083	20,828	158	3,364	233	-----	5,427
1963-----	279,797	143,641	13,868	2,586	7,023	21,706	20,701	230	3,324	613	1	7,159
1964-----	306,650	137,388	6,528	2,506	6,528	21,325	24,949	160	3,495	700	3	6,269
1965-----	378,135	159,481	16,048	2,608	9,872	27,321	41,309	113	3,707	732	2	8,988
1966-----	433,363	190,623	18,898	2,911	11,132	28,888	35,141	13,083	4,473	1,194	0	9,274
State and local government:												
1962-----	1,434,206	606,232	68,707	18,998	32,668	82,531	137,352	160	11,807	8,079	399	53,542
1963-----	1,509,692	635,874	70,779	18,989	34,358	90,342	141,791	157	14,006	8,230	1,112	60,805
1964-----	1,692,522	750,574	72,255	16,786	37,171	99,574	147,210	239	15,235	10,541	1,788	65,203
1965-----	1,901,429	823,749	81,643	17,949	42,273	111,759	181,225	60	18,764	12,023	1,834	76,164
1966-----	2,108,326	900,514	89,454	18,236	49,516	130,867	206,547	462	21,986	16,066	2,026	86,622

TABLE C-9.—Departmental patient revenues, by type of control, 1962-66—*Continued*

[In thousands]												
Type of control and year	Inpatient revenues—Continued					Outpatient revenues						
	Pharmacy	Transfusion service	Oxygen	Blood and blood plasma	Other in-patient revenues	Radiology	Laboratory	Electrocardiology	Physical therapy	Pharmacy	Emergency	Other out-patient revenues
United States:												
1962.....	\$579,501	\$26,511	\$61,743	\$55,120	\$198,224	\$159,258	\$75,436	\$6,058	\$15,759	\$31,796	\$72,768	\$157,366
1963.....	600,170	26,465	70,348	58,009	235,978	178,768	86,215	8,048	16,896	35,942	80,495	137,643
1964.....	647,226	25,078	86,802	67,769	273,961	200,370	95,998	10,255	18,840	45,791	91,122	154,033
1965.....	684,280	27,199	101,799	76,391	325,916	223,059	111,035	10,000	22,178	53,080	106,541	171,796
1966.....	783,513	38,670	128,012	83,379	361,930	259,874	122,499	11,842	49,552	62,033	126,695	203,965
Nonprofit:												
1962.....	407,407	17,547	45,319	37,367	131,569	112,675	48,523	5,236	13,596	22,158	54,336	73,734
1963.....	425,811	17,284	52,101	37,545	157,634	129,558	54,285	6,273	13,946	24,926	60,401	63,016
1964.....	466,356	17,261	61,817	41,162	159,647	149,471	63,816	8,729	13,819	30,015	70,984	66,230
1965.....	493,314	19,575	71,246	46,619	194,609	168,010	74,443	7,883	18,808	35,127	82,310	69,492
1966.....	556,177	30,096	89,821	52,841	222,853	196,525	90,260	9,361	45,789	43,301	98,004	89,163
For-profit:												
1962.....	43,165	110	2,345	449	4,464	3,253	1,309	9	37	374	434	393
1963.....	43,309	222	2,042	480	3,845	5,094	2,264	63	55	399	822	352
1964.....	37,517	255	2,003	474	31,794	6,580	3,648	10	69	6,138	764	753
1965.....	45,659	275	2,078	387	41,491	3,306	4,100	53	53	6,502	1,248	2,803
1966.....	55,962	433	3,206	395	34,012	8,418	4,521	70	0	6,935	1,357	2,436
State and local government:												
1962.....	128,929	8,855	14,079	17,304	62,190	43,331	25,603	814	2,126	9,265	17,998	83,239
1963.....	131,050	8,959	16,204	19,984	74,499	44,115	29,665	1,712	2,806	10,618	19,272	74,274
1964.....	143,352	7,561	22,982	26,133	82,530	44,320	28,534	1,516	2,953	9,638	19,374	87,050
1965.....	155,308	7,349	28,476	30,385	89,816	51,743	32,492	2,063	3,317	11,451	22,964	99,501
1966.....	171,374	8,144	34,985	30,143	105,065	54,931	27,718	2,411	3,763	11,797	27,334	112,366

[In thousands]

TABLE C-10.—Departmental patient revenues, by bed size of hospital, 1962-66  
[In thousands]

Bed size and year	Total patient revenues	Inpatient revenues								Ambulance service	Medical and surgical services
		Room and board	Operating rooms	Delivery rooms	Anesthesiology	Radiology	Laboratory	Basal metabolism	Electrocardiology	Physical therapy	
6-99 beds:											
1962.....	\$1,093,673	\$507,836	\$59,309	\$22,769	\$29,171	\$74,923	\$96,154	\$1,188	\$6,567	\$5,788	\$34
1963.....	1,206,036	559,153	63,443	22,549	34,643	86,669	110,688	1,328	9,495	5,513	25
1964.....	1,270,555	577,285	67,586	20,476	34,369	88,923	112,181	1,261	10,373	7,353	41
1965.....	1,344,924	606,227	70,865	19,905	39,462	97,259	132,915	1,508	11,520	7,171	57
1966.....	1,496,068	676,454	74,822	20,113	43,088	109,607	139,824	16,847	12,820	9,320	136
100-199 beds:											
1962.....	1,230,761	627,829	72,165	20,603	29,542	85,329	115,265	490	11,044	6,464	235
1963.....	1,301,655	659,777	76,063	19,857	29,563	88,579	119,329	450	11,846	6,980	269
1964.....	1,483,068	752,481	84,691	20,584	31,320	101,507	140,053	529	14,662	8,114	269
1965.....	1,623,809	815,971	92,866	20,500	36,620	110,524	154,507	658	16,894	10,677	232
1966.....	1,814,665	906,304	102,641	21,034	40,877	121,309	170,119	762	20,283	12,154	332
200-299 beds:											
1962.....	1,281,453	622,166	71,588	18,180	39,311	91,580	132,257	1,032	13,984	12,750	1,530
1963.....	1,374,905	666,833	75,605	17,885	38,795	105,562	145,560	1,086	18,446	12,446	1,398
1964.....	1,554,805	753,962	81,448	18,269	40,974	120,767	163,369	1,248	22,285	14,564	1,272
1965.....	1,622,226	778,735	86,016	20,650	44,074	123,357	168,870	1,275	21,797	14,499	1,255
1966.....	1,822,245	874,189	99,789	21,951	48,653	134,756	187,180	1,150	24,727	15,946	1,295
300-499 beds:											
1962.....	1,552,597	725,507	77,740	25,062	30,663	95,732	152,617	599	33,741	10,688	320
1963.....	1,715,621	803,555	88,021	25,331	34,806	103,437	172,003	21,319	21,669	11,807	1,245
1964.....	1,886,302	899,699	98,289	26,692	39,115	115,415	193,910	706	42,168	13,122	1,242
1965.....	2,191,151	1,029,011	109,922	28,019	45,019	133,729	224,369	29,203	29,377	15,389	1,554
1966.....	2,481,312	1,142,033	121,180	28,427	54,067	152,269	253,779	45,186	33,552	17,997	1,631
500 or more beds:											
1962.....	1,309,324	565,681	67,213	13,513	25,172	70,920	126,353	814	14,440	8,155	293
1963.....	1,415,728	628,445	71,362	14,014	26,958	78,291	136,154	868	16,083	8,792	774
1964.....	1,752,275	735,245	75,252	13,475	30,535	89,729	149,734	1,018	16,760	11,737	1,413
1965.....	1,856,658	823,445	86,330	15,389	34,150	104,618	194,090	1,218	20,974	12,550	1,849
1966.....	2,185,819	947,728	104,153	16,730	38,489	125,596	233,052	1,765	25,666	16,952	1,404



TABLE C-10.—Departmental patient revenues, by bed size of hospital, 1962-66—*Continued*  
 [In thousands]

Bed size and year	Inpatient revenues—Continued					Outpatient revenues						
	Phar- macy	Trans- fusion service	Oxygen	Blood and blood plasma	Other in- patient revenues	Radi- ology	Labora- tory	Electro- cardi- ology	Physical therapy	Phar- macy	Emer- gency	Other out- patient revenues
6-99 beds:												
1962.....	\$142,585	\$2,717	\$9,798	\$4,287	\$12,739	\$27,787	\$18,974	\$302	\$1,158	\$1,331	\$6,104	\$9,668
1963.....	150,101	3,657	12,245	4,219	17,404	30,309	19,803	256	1,113	1,743	6,933	9,160
1964.....	150,968	3,872	12,273	3,589	46,763	30,161	21,604	363	1,587	9,319	8,372	9,010
1965.....	153,356	3,872	12,122	3,978	46,491	31,454	23,403	509	1,185	11,485	11,715	3,406
1966.....	173,537	4,027	13,785	4,945	47,782	30,817	16,697	608	1,354	16,186	12,248	7,344
100-199 beds:												
1962.....	122,955	5,088	11,420	3,692	16,358	26,117	10,529	524	1,240	6,776	13,065	7,934
1963.....	126,396	5,194	13,023	3,528	21,768	30,691	12,439	750	2,280	7,508	15,281	10,005
1964.....	137,721	4,794	14,811	3,982	28,334	39,427	15,937	1,024	2,368	8,182	18,294	8,240
1965.....	149,947	4,187	15,537	5,157	28,724	44,426	19,418	1,212	2,969	10,194	20,552	10,478
1966.....	163,117	4,701	19,873	6,658	32,772	52,214	25,624	1,366	4,391	12,443	24,787	14,206
200-299 beds:												
1962.....	119,439	4,909	13,003	9,716	18,973	27,369	13,204	1,048	5,052	3,601	16,652	7,711
1963.....	122,760	3,559	12,804	9,361	22,354	29,173	13,782	1,790	3,904	4,086	18,857	6,572
1964.....	134,975	2,964	16,171	10,121	26,768	36,820	14,693	2,949	4,632	4,775	22,392	7,632
1965.....	137,077	5,327	18,981	10,217	42,457	33,205	15,872	2,911	4,817	4,649	22,907	11,153
1966.....	154,861	11,048	23,182	11,848	40,388	44,042	18,904	3,373	5,513	5,835	27,288	9,129
300-499 beds:												
1962.....	115,620	3,328	16,250	17,877	63,624	44,689	17,676	2,882	4,476	10,871	20,038	38,323
1963.....	122,904	3,232	18,522	19,044	65,776	52,624	19,417	3,028	5,093	10,228	24,240	40,718
1964.....	136,506	4,042	22,156	21,665	54,623	57,638	22,321	3,211	5,468	11,978	26,503	36,784
1965.....	152,052	5,241	27,002	23,659	80,996	71,383	25,698	2,840	7,033	13,508	32,526	42,054
1966.....	168,259	5,926	34,128	25,712	84,677	80,218	31,182	3,496	3,308	14,848	36,841	49,796
500 or more beds:												
1962.....	78,902	10,470	11,273	19,548	86,530	33,296	15,053	1,302	3,833	9,216	16,909	93,731
1963.....	78,009	10,824	13,754	21,857	108,675	35,971	20,773	2,223	4,506	12,377	15,185	71,188
1964.....	87,056	9,406	21,473	28,412	117,473	36,324	21,443	2,708	4,786	11,538	16,501	92,308
1965.....	101,848	8,572	28,158	33,380	127,249	42,591	26,644	2,529	6,174	13,244	18,841	104,704
1966.....	123,742	12,967	37,044	34,216	156,311	52,583	30,093	2,998	6,986	12,721	23,531	123,491



TABLE C-11.—Departmental operating expenses, by type of control, 1962-66

[In thousands]

Type of control and year	Total operating expenses	Administration and general	Dietary	House-keeping department	Laundry department	Linen service	Maintenance of personnel	Operation of plant	Motor service	Repair and maintenance	Nursing service	Nursing education
United States:												
1962-----	\$6,365,075	\$725,371	\$660,403	\$280,062	\$133,084	\$46,087	\$16,062	\$257,556	\$5,187	\$167,958	\$1,429,919	\$96,658
1963-----	6,866,697	771,779	694,138	303,867	137,358	49,377	17,590	277,166	5,746	176,693	1,552,760	102,873
1964-----	7,603,975	859,248	748,519	323,414	145,307	54,790	20,733	299,637	6,805	195,788	1,711,318	110,014
1965-----	8,411,140	961,966	795,846	349,260	159,390	56,649	28,804	329,772	7,106	212,138	1,883,956	128,928
1966-----	9,516,601	1,110,025	874,643	390,179	171,345	64,885	30,002	372,218	10,573	227,222	2,095,654	125,821
Nonprofit:												
1962-----	4,515,311	507,388	477,294	195,862	94,032	31,811	11,146	184,758	3,810	114,225	998,614	84,813
1963-----	4,903,636	556,359	502,799	210,204	97,118	36,616	12,823	200,635	3,929	124,652	1,094,481	89,971
1964-----	5,441,220	615,720	541,325	230,538	103,915	40,607	16,056	217,053	5,294	138,822	1,214,899	96,703
1965-----	5,935,600	671,957	566,200	245,052	113,688	41,357	21,652	238,064	5,273	143,641	1,309,851	113,131
1966-----	6,767,169	782,374	627,854	276,549	123,400	44,440	22,996	265,886	9,166	157,014	1,465,676	109,616
For-profit:												
1962-----	219,014	27,111	22,919	5,883	5,652	2,183	17	7,500	165	4,616	37,137	281
1963-----	271,737	35,766	27,726	9,026	6,754	1,284	28	7,612	236	4,501	42,620	869
1964-----	291,245	39,644	28,403	7,461	7,111	1,700	31	9,085	261	6,220	42,663	630
1965-----	361,657	53,798	36,662	9,405	8,071	787	217	12,268	0	7,850	67,963	616
1966-----	390,370	59,818	38,110	9,317	7,593	4,477	351	13,087	56	7,366	68,747	610
State and local government:												
1962-----	1,630,750	190,872	160,191	78,317	33,400	12,093	4,899	65,297	1,211	49,117	394,166	11,564
1963-----	1,691,324	179,655	163,613	84,638	33,486	11,476	4,739	68,919	1,581	47,541	415,659	12,033
1964-----	1,871,510	203,883	178,791	85,416	34,281	12,483	4,646	73,499	1,250	50,746	453,736	12,681
1965-----	2,113,883	236,212	192,983	94,804	37,631	14,506	6,936	79,441	1,361	60,646	506,142	15,181
1966-----	2,359,061	267,833	208,679	104,313	40,352	15,968	6,655	93,245	1,351	62,842	561,231	15,595

TABLE C-11.—Departmental operating expenses, by type of control, 1962-66—Continued

[In thousands]

Type of control and year	Medical-surgical service	Pharmacy department	Medical record and library	Social service department	Operating room	Delivery room	Department of anesthesiology	Department of radiology	Laboratory department	Basal metabolism	Electrocardiology	Physical therapy department
<b>United States:</b>												
1962-----	\$310,407	\$273,676	\$70,019	\$18,062	\$242,587	\$103,568	\$95,077	\$305,350	\$367,342	\$2,369	\$27,837	\$34,555
1963-----	339,264	293,423	78,548	17,421	262,450	109,117	104,963	333,147	416,498	3,408	33,550	36,852
1964-----	380,424	317,533	87,599	20,727	291,402	113,413	114,854	387,049	461,482	5,245	41,337	42,563
1965-----	408,057	339,682	99,494	26,929	324,697	121,062	130,801	433,701	521,678	4,735	47,174	48,852
1966-----	463,814	386,928	112,718	30,759	366,368	134,029	150,178	502,922	603,422	5,793	54,562	56,326
<b>Nonprofit:</b>												
1962-----	199,161	186,340	49,718	8,017	182,969	83,523	67,909	226,966	262,393	2,185	23,089	26,024
1963-----	221,758	198,042	57,230	9,063	197,740	85,746	75,688	246,037	304,491	3,010	27,666	28,002
1964-----	249,307	216,856	63,021	11,397	217,996	86,521	83,584	288,389	335,530	3,550	33,601	32,928
1965-----	266,267	228,859	69,772	14,217	238,774	92,316	92,380	314,425	373,641	4,096	37,777	37,294
1966-----	322,904	262,717	78,374	16,826	268,564	99,118	105,679	362,749	433,152	4,823	43,403	43,333
<b>For-profit:</b>												
1962-----	15,007	18,286	1,150	0	7,850	1,721	2,593	10,277	10,811	0	397	143
1963-----	17,574	28,766	1,829	0	9,380	2,798	3,510	13,656	12,413	0	465	194
1964-----	23,114	26,595	2,605	0	10,886	2,775	3,954	13,065	14,535	0	517	287
1965-----	19,747	30,774	3,647	0	13,366	5,762	6,432	19,586	20,551	0	731	321
1966-----	22,058	29,685	3,703	0	17,101	9,847	6,402	22,253	22,047	0	976	370
<b>State and local government:</b>												
1962-----	96,238	69,049	19,151	10,046	51,768	18,323	24,574	68,106	94,138	184	4,351	8,388
1963-----	99,932	66,615	19,489	8,359	55,330	20,573	25,766	73,456	99,594	397	5,420	8,656
1964-----	108,003	74,081	21,972	9,332	62,519	24,117	27,316	85,596	111,417	1,695	7,219	9,348
1965-----	122,043	80,049	26,076	12,715	72,557	22,984	31,989	99,692	127,486	638	8,666	11,238
1966-----	118,852	94,526	30,641	13,933	80,703	25,064	38,097	117,920	148,223	970	10,183	12,623

TABLE C-11.—Departmental operating expenses, by type of control, 1962-66—Continued

[In thousands]

Type of control and year	Ambulance service	Outpatient department	Emergency department	Depreciation of buildings	Depreciation of equipment	Interest	Rent	Other
United States:								
1962-----	\$4,672	\$96,439	\$49,074	\$136,431	\$124,517	\$27,250	\$8,454	\$249,044
1963-----	5,117	100,420	59,364	150,956	139,765	30,354	11,910	250,825
1964-----	11,668	118,668	68,664	164,510	151,658	35,121	17,727	296,733
1965-----	6,601	137,670	86,032	190,791	172,108	49,437	17,317	330,506
1966-----	6,047	154,390	105,511	220,887	205,888	63,184	25,363	394,945
Nonprofit:								
1962-----	2,055	58,502	33,935	110,359	97,852	21,077	2,575	166,904
1963-----	2,390	62,072	39,594	123,032	109,506	22,608	3,127	157,251
1964-----	3,072	71,170	48,008	133,042	119,167	25,173	9,492	188,553
1965-----	2,867	81,671	57,342	149,932	132,226	35,089	10,502	225,817
1966-----	2,981	91,618	72,102	172,060	161,477	47,518	14,457	278,344
For-profit:								
1962-----	128	444	0	4,461	5,025	2,082	5,477	19,695
1963-----	173	591	0	5,059	6,222	2,824	8,573	21,301
1964-----	151	930	0	5,883	5,597	4,645	8,170	24,335
1965-----	331	910	0	10,373	8,533	9,630	6,618	6,702
1966-----	0	1,150	0	12,779	8,299	10,603	10,489	3,074
State and local government:								
1962-----	2,488	37,492	15,140	21,611	21,640	4,090	401	62,444
1963-----	2,554	37,758	19,779	22,866	24,037	4,923	210	72,273
1964-----	8,472	46,569	20,662	25,586	26,893	5,302	135	83,845
1965-----	55,088	55,088	28,701	30,466	31,850	4,718	197	97,987
1966-----	3,066	61,622	33,409	36,048	36,112	5,063	417	113,527

TABLE C-12.—Departmental operating expenses, by bed size of hospital, 1962-66

[In thousands]

Bed size and year	Total operating expenses	Administration and general	Dietary	House-keeping department	Laundry department	Linen service	Maintenance of personnel	Operation of plant	Motor service	Repair and maintenance	Nursing service	Nursing education
<b>6-99 beds:</b>												
1962-----	\$1,032,385	\$131,864	\$103,618	\$42,070	\$25,500	\$7,518	\$1,080	\$41,491	\$201	\$20,458	\$244,051	\$1,331
1963-----	1,159,104	148,088	113,952	49,088	26,600	7,187	983	46,434	555	23,920	275,193	1,495
1964-----	1,205,215	154,474	116,232	49,967	25,842	6,446	983	50,643	500	25,173	288,422	1,684
1965-----	1,275,096	175,310	120,612	50,250	27,704	7,882	995	50,876	202	27,004	310,728	3,426
1966-----	1,388,547	188,762	130,725	53,987	29,678	9,891	1,099	57,693	258	25,696	332,322	1,013
<b>100-199 beds:</b>												
1962-----	1,185,523	136,653	127,849	45,636	24,855	10,055	2,269	47,533	1,534	27,677	287,389	12,377
1963-----	1,250,832	154,256	131,129	48,800	25,264	8,495	2,405	49,687	966	27,921	297,982	13,413
1964-----	1,412,500	170,956	145,376	53,490	27,859	9,462	3,676	56,186	596	31,994	336,448	14,211
1965-----	1,542,618	189,380	154,019	57,782	30,242	10,135	3,667	61,316	427	36,621	362,030	17,384
1966-----	1,722,161	210,531	168,871	63,223	32,973	12,146	3,658	66,199	457	41,259	400,802	17,902
<b>200-299 beds:</b>												
1962-----	1,262,409	142,533	137,246	53,133	28,866	8,950	2,610	50,025	476	32,842	290,684	22,475
1963-----	1,337,841	153,700	140,472	53,328	28,193	12,244	3,205	54,275	749	35,989	311,757	21,401
1964-----	1,437,217	170,580	153,022	58,520	29,247	15,498	3,582	60,692	2,482	38,517	345,573	22,838
1965-----	1,566,778	182,925	154,737	61,420	32,428	11,637	3,493	67,077	509	31,014	367,939	24,309
1966-----	1,752,326	204,400	168,125	65,658	32,578	12,654	4,534	75,466	556	31,197	409,149	25,074
<b>300-499 beds:</b>												
1962-----	1,434,023	149,847	154,786	70,499	27,297	8,037	3,866	63,525	1,376	41,980	301,929	37,671
1963-----	1,615,983	167,051	169,270	77,206	30,661	9,528	4,676	71,012	1,411	42,002	358,898	41,448
1964-----	1,763,555	181,449	177,059	84,110	32,040	9,515	5,157	74,196	1,517	46,478	389,634	43,566
1965-----	2,031,585	214,428	191,175	92,211	35,131	11,061	8,501	84,528	1,657	53,643	439,040	50,865
1966-----	2,317,491	249,092	209,697	106,082	37,761	12,458	7,969	97,761	4,548	58,429	491,189	45,588
<b>500 or more beds:</b>												
1962-----	1,450,736	164,474	136,904	68,724	26,567	11,527	6,258	54,983	1,601	44,999	305,866	22,805
1963-----	1,502,939	148,684	139,315	73,445	26,640	11,923	6,322	57,759	2,065	46,861	308,930	25,116
1964-----	1,725,488	181,790	156,829	77,327	30,319	13,870	8,045	63,626	1,711	53,626	351,241	28,715
1965-----	1,995,061	199,922	175,304	87,598	33,886	13,935	12,148	65,975	4,311	63,855	404,219	32,854
1966-----	2,336,075	257,239	197,224	101,229	38,357	17,737	12,742	75,097	4,794	70,642	462,192	36,243



TABLE C-12.—Departmental operating expenses, by bed size of hospital, 1962-66—Continued

[In thousands]

Bed size and year	Medical surgical service	Pharmacy department	Medical record and library	Social service department	Operating room	Delivery room	Department of anesthesiology	Laboratory department	Basal metabolism	Electrocardiology	Physical therapy department
6-99 beds:											
1962-----	\$43,843	\$57,284	\$8,743	\$385	\$39,824	\$22,729	\$17,818	\$53,358	\$367	\$1,430	\$3,606
1963-----	45,004	70,173	12,046	147	43,793	26,134	21,234	59,709	554	1,761	4,017
1964-----	50,495	69,023	13,331	122	43,261	23,307	20,303	63,344	1,693	2,312	4,856
1965-----	55,056	69,402	13,475	998	47,329	20,600	20,897	69,273	673	2,595	5,416
1966-----	55,102	77,489	14,708	102	54,153	23,625	27,025	79,497	708	3,249	5,455
100-199 beds:											
1962-----	52,848	58,544	13,224	303	53,143	24,173	17,137	71,599	46	5,902	4,701
1963-----	59,251	61,167	14,672	268	55,562	21,740	17,804	77,214	29	6,816	5,107
1964-----	69,207	64,487	16,466	241	62,330	22,477	20,544	88,614	21	8,122	6,041
1965-----	61,960	69,153	18,794	132	67,562	24,454	21,631	84,893	18	10,575	7,356
1966-----	68,220	76,959	19,916	109	74,555	28,887	25,714	107,946	36	11,859	9,136
200-299 beds:											
1962-----	49,703	50,998	14,224	1,979	48,610	21,729	19,447	68,047	223	6,805	7,616
1963-----	57,658	52,966	16,259	2,244	52,025	24,021	21,125	87,730	869	8,838	7,992
1964-----	63,767	59,046	18,119	2,310	59,208	24,838	24,483	99,866	1,249	11,384	9,505
1965-----	65,953	59,279	20,882	2,469	63,104	27,667	27,621	89,488	779	11,453	10,392
1966-----	73,908	67,227	23,719	3,315	69,656	28,959	30,203	100,335	753	12,354	11,819
300-499 beds:											
1962-----	67,338	57,898	16,244	3,797	55,325	20,683	19,511	66,324	850	8,093	8,650
1963-----	75,692	60,644	17,401	4,116	59,809	23,015	21,353	74,732	817	9,776	8,938
1964-----	83,953	66,082	19,161	5,791	66,427	25,077	23,268	103,384	901	11,683	10,010
1965-----	93,555	77,164	22,402	8,852	77,164	29,287	28,061	133,978	1,609	13,473	11,261
1966-----	124,618	85,509	25,089	9,772	88,455	31,366	36,325	158,192	2,031	15,792	13,035
500 or more beds:											
1962-----	96,675	48,953	17,586	11,600	45,685	14,253	21,164	55,688	883	5,607	9,982
1963-----	101,658	48,473	18,170	10,646	51,261	14,208	23,446	55,768	1,138	6,360	10,778
1964-----	113,021	56,895	20,524	12,264	60,172	17,075	26,251	74,929	1,381	7,831	12,170
1965-----	131,534	67,403	23,942	14,478	69,539	19,054	29,596	96,275	1,656	9,079	14,427
1966-----	141,967	79,746	29,287	17,462	79,549	21,192	30,910	89,344	2,266	11,308	16,880



TABLE C-12.—Departmental operating expenses, by bed size of hospital, 1962-66—*Continued*

[In thousands]

Bed size and year	Ambulance service	Outpatient department	Emergency department	Depreciation of buildings	Depreciation of equipment	Interest	Rent	Other
<b>6-99 beds:</b>								
1962-----	\$19	\$9,866	\$1,288	\$22,437	\$22,900	\$4,280	\$3,477	\$46,229
1963-----	6	5,725	2,716	25,263	28,018	8,274	8,463	41,666
1964-----	71	5,767	3,764	24,722	25,745	10,573	11,775	46,526
1965-----	851	5,531	4,473	27,350	29,551	13,372	11,675	27,105
1966-----	245	5,145	6,070	31,580	34,606	13,393	13,928	27,226
<b>100-199 beds:</b>								
1962-----	153	3,437	9,553	33,956	23,689	4,972	0	22,390
1963-----	187	4,969	10,220	34,993	25,846	4,629	91	24,576
1964-----	154	5,434	12,082	40,774	29,061	7,082	1,381	28,841
1965-----	359	8,403	14,600	48,164	32,584	15,428	1,270	37,737
1966-----	63	9,521	17,347	57,033	39,848	18,771	1,986	40,678
<b>200-299 beds:</b>								
1962-----	1,235	8,203	12,115	20,666	28,589	3,327	4,651	46,275
1963-----	1,154	10,237	13,276	22,224	29,752	3,705	2,258	31,729
1964-----	1,882	12,704	15,133	24,804	35,305	4,053	3,233	37,432
1965-----	1,459	10,194	19,152	24,730	36,578	5,669	3,418	41,231
1966-----	1,320	11,911	23,753	32,981	40,649	11,452	4,657	53,265
<b>300-399 beds:</b>								
1962-----	833	15,523	12,047	38,742	33,272	8,638	326	50,026
1963-----	822	17,069	14,271	43,461	37,832	7,971	630	61,392
1964-----	849	19,753	17,181	45,916	40,659	7,581	842	78,917
1965-----	1,259	24,334	21,820	55,770	48,050	7,501	1,173	96,263
1966-----	954	27,432	24,807	59,853	55,247	8,023	668	115,888
<b>500 or more beds:</b>								
1962-----	2,432	59,410	14,070	20,630	16,067	6,033	0	84,124
1963-----	2,947	62,420	18,781	25,015	18,318	5,776	468	91,462
1964-----	8,739	74,901	20,504	28,296	20,887	5,862	497	105,017
1965-----	2,672	88,699	25,987	34,776	25,345	7,467	772	128,171
1966-----	3,465	100,330	33,534	39,441	35,539	11,546	4,125	157,888

2. Although hospitals are labor-intensive with payroll expenses accounting for about 60 percent of all operating costs, nonlabor costs have increased at a more rapid rate over the period than labor costs.
3. There has been some shift in the composition of hospital personnel toward the higher-skilled occupations such as professional patient-care employees and some shift in the composition of plant assets toward more major equipment.
4. The increase in labor expense per day of hospital care was due three-fourths to increased wages and one-fourth to increased staff; wages of the lowest-paid occupations rose relative to those of more highly skilled occupations.
5. For-profit hospitals had fewer employees, paid lower salaries, and used fewer plant assets per day of care than either nonprofit or State and local government hospitals; the rate of increase in expenses per patient day, however, was greater in for-profit hospitals.
6. Most of the increase in expenses has occurred in the provision of ancillary hospital services rather than basic room and board services.
7. Hospitals' price-cost margins on ancillary services vary widely from service to service, ranging from .89 on delivery room services to 2.05 on pharmacy services.
8. Room and board charges yield less than one-half of patient revenue, with rapid increases in revenue coming from ancillary services (especially radiology and laboratory) and outpatient services.
9. Increases in days of hospital care and number of admissions were quite moderate, while outpatient services expanded significantly.

The study concludes that the demand-pull theory and scientific-progress view of inflation are most consistent with the types of hospital cost increases that occurred in the pre-Medicare period. The labor cost-push theory is inadequate for this period, but there is some support for the view of inflation emphasizing the expanded scope of the community hospital.

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